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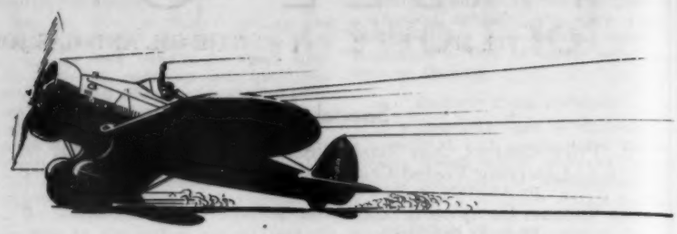

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# Price Cutters, Not Basic Conditions, Responsible for Lowering Posted Crude Oil Schedules

By ANDREW M. ROWLEY

CRUDE oil price reductions announced during the past week had been anticipated and did not surprise anyone who had been watching the trend of price cutting which had been spreading through a number of areas. And, further reductions undoubtedly will be made unless this policy of selling under regularly posted prices is discontinued. Large buyers cannot be expected to pay more for their raw material than their competitors are paying.

Despite the fact recent crude price reductions were warranted by conditions brought about by price cutters, there has been to many minds considerable seeming inconsistency in the whole matter of prices. Statements have been made to the effect crude oil prices were too high to permit a profit being made from gasoline sales at the then quoted prices for gasoline. But when crude oil prices were reduced, supposedly for this reason, gasoline prices also were lowered.

Sometimes it is extremely hard to understand why gasoline prices are reduced, especially in areas dominated by larger companies, when there is not and has not been any agitation upon the part of the public for lower prices. If crude oil prices are to be based on returns from sales of refined products, it seems like a mighty poor way to stabilize conditions by reducing gasoline prices.

As has been pointed out several times before, recent price reductions were not due to any unfavorable basic conditions in the petroleum industry. Basic conditions are better than they have been in years. Stocks are lower than they have been since 1928. Production is not sufficient to meet requirements and withdrawals from storage have been made almost continuously since 1929. Yet prices for crude oil are below what they were when production was 900,000 barrels daily more than it is now and when consumption was less than it is now. In August, 1929, crude oil production reached a daily average for a week of 2,975,000 barrels and the price of 37 gravity crude in Oklahoma, Kansas and North Texas was $1.50 a barrel.

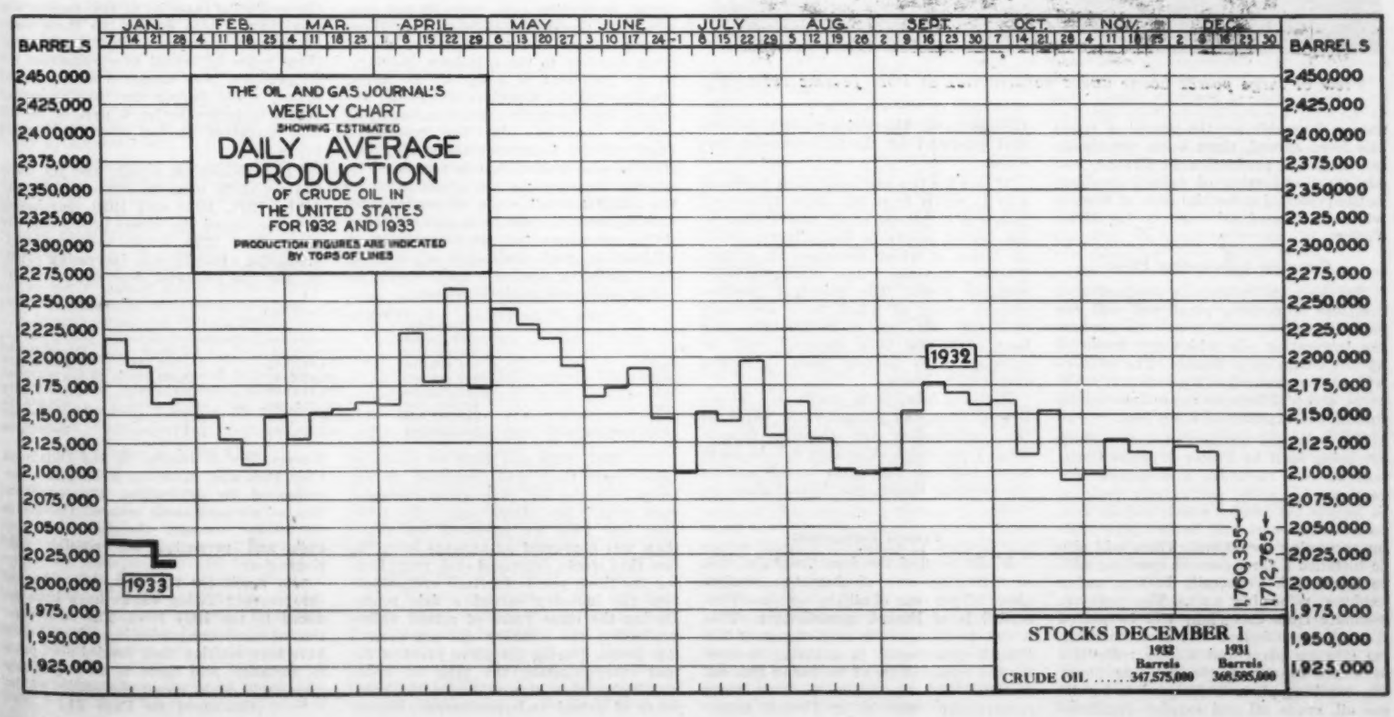
Careful consideration should be given at this time to the matter of the effect of low prices on proration. There is no question the present proration policy is losing many former adherents. We still contend proration would have been far more effective had producers been given some reward for their sacrifices. In other words when they reduced their production to try to stabilize conditions they should have been given an increase in price so that their net income would not have been reduced.

## Crude Oil Production in the United States

Estimated daily average production for the week ending January 21 and a comparison with previous week and one year ago, follows:

| | Jan. 21 | Jan. 14 | Jan. 23, 1932 |
|---|---|---|---|
| Oklahoma— | | | |
| Oklahoma City | 71,220 | 102,940 | 95,685 |
| Seminole-St. Louis | 110,115 | 104,225 | 114,810 |
| Remainder of State | 193,485 | 194,195 | 200,440 |
| Total Oklahoma | 374,820 | 401,360 | 410,935 |
| East Texas— | | | |
| Lathrop | 114,112 | 114,155 | 106,760 |
| Kilgore | 90,989 | 85,743 | 114,326 |
| Joiner | 93,125 | 93,510 | 111,695 |
| Total East Texas | 298,226 | 293,408 | 332,781 |
| West Texas | 158,986 | 159,936 | 173,746 |
| North Central Texas | 70,805 | 70,962 | 75,285 |
| Texas Panhandle | 44,493 | 44,127 | 52,863 |
| East Central Texas | 48,235 | 48,325 | 49,775 |
| Gulf Coast—Texas | 127,645 | 125,515 | 105,904 |
| Southwest Texas | 53,410 | 54,662 | 58,110 |
| Total State of Texas | 801,800 | 796,935 | 848,464 |
| Kansas | 91,940 | 88,585 | 97,620 |
| North Louisiana | 30,245 | 28,495 | 29,030 |
| Gulf Coast—Louisiana | 35,927 | 36,605 | 28,462 |
| Arkansas | 32,165 | 32,200 | 34,325 |
| Eastern Fields | 114,000 | 116,000 | 121,000 |
| Rocky-Mountain area | 71,676 | 66,790 | 81,044 |
| California— | | | |
| Santa Fe Springs | 55,000 | 55,000 | 66,500 |
| Long Beach | 67,000 | 67,000 | 77,500 |
| Playa Del Rey | 13,000 | 13,000 | 21,000 |
| Elwood | 13,500 | 14,000 | 16,500 |
| Kettleman Hills | 60,250 | 60,000 | 60,000 |
| Remainder of State | 260,750 | 263,000 | 265,250 |
| Total California | 469,500 | 472,000 | 506,750 |
| Total United States | 2,022,073 | 2,038,970 | 2,157,630 |

Decrease 16,897 bbls. daily.



# Vacuum Oil Subsidiary Completing 5,000 Barrel Refinery in Port Jerome District of France

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Jan. 21.—One of the interesting new foreign refinery construction projects now nearing completion is that of the Raffineries de la Vacuum Oil Co., S.A.F., located in the Port Jerome area in France. This new refinery, like the adjoining plant of Standard Franco Americaine de Raffinage, also nearing completion, is being built as the result of legislation enacted in France during the past few years placing a time limit on the duration of existing licenses covering the importation of finished petroleum products into France as well as placing a substantial duty protection on products manufactured in France. This legislation makes it necessary for the petroleum distributing companies doing business in France to manufacture on French territory.

The new Vacuum refinery is being built on the lower Seine River at Port Jerome, where the Port of Rouen is constructing a petroleum basin for the receipt of crude oil and the shipment of inflammable finished products. This location is favorable for the receipt of crude oils from abroad, there being practically no crude oil production in France, and for the distribution of refined products to the principal industrial area of France, which is located adjacent to the Seine Valley.

*View of large power house under construction at Port Jerome refinery*

### Complete Lubricating Plant

The Vacuum refinery is designed as a complete lubricating plant and will run on selected imported crudes to produce the lubricating oils which are marketed by this company in France. The refinery will occupy an area of approximately 150 acres, and will have an approximate daily throughput capacity of 5,000 bbls.

The principal distillation units, which are being built by Foster Wheeler Corp., will be two two-stage atmospheric and vacuum pipe stills, particularly designed to handle the crudes which will be run. In addition there will be two pipe stills for rerunning operations. There will also be installed a three-furnace cracking still, equipped with a viscosity breaker and a naphtha reforming unit. The pressure distillate from this plant will be passed through a continuous Sharples centrifuging treating plant and will be redistilled by waste heat from the cracking plant. The cracking plant is designed to handle gas oil, crude oil and surplus distillates from the crude units. The wax distillate from the crude units will be dewaxed in a more or less conventional wax plant, the refrigeration to be supplied by compression machines. A bright stock will be dewaxed in a Sharples dewaxing plant.

### Large Power Plant

Steam and electricity will be supplied to the refinery from a power plant located near the river. The boilers will be operated at 350 pounds pressure. The boilers are especially designed to burn acid sludge fuels from the treating departments. The steam from the boilers at 350 pounds will be passed through a back-pressure turbine, exhausting at 150 pounds. The general refinery steam will be distributed at this pressure. A second back-pressure turbine will also take steam at this pressure and exhaust at 25 pounds, which steam will be distributed to the refinery for general heating service. A third turbo-generator will be a condensing unit taking steam directly from the boilers at 350 pounds. This unit will be used to balance steam demands, only making the amount of electricity required beyond that produced by the back-pressure turbines.

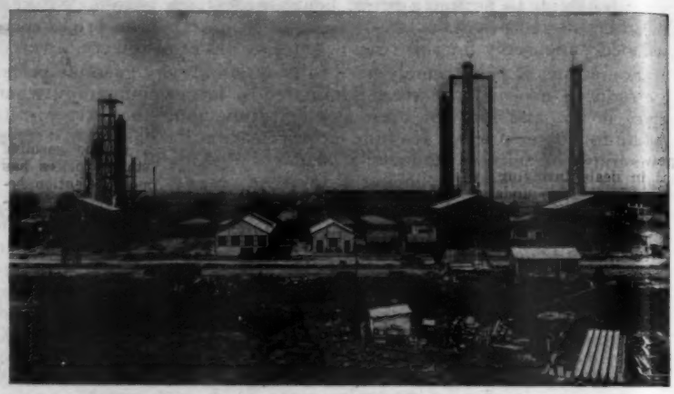
Water for fire and condensing purposes will be taken from the Seine River and delivered by pumps in the power plant to the desired points in the refinery. Crude oil tanks, of which there are six of 80,000-bbl. capacity, are equipped with breather roofs. The principal gasoline storage tanks, of which there are three of 50,000 bbls., two of 20,000 bbls., and four of 10,000 bbls. capacity, will be equipped with floating roofs to reduce evaporation losses.

Finished lubricating stocks will be delivered from the contact-filter plant to the compounding and shipping department, from which shipments will be made to all parts of France in barrels and to the existing Rouen can filling plant by barge.

### French Equipment

While most of the departments of this new refinery are of American design, about 95 per cent of all the equipment installed is of French manufacture. This is due to the specific requirement of the French government in granting licenses for the construction of refineries that all material and equipment used in their construction must be of French manufacture unless it could be proved that such articles could not be made in France.

Under construction, in addition to the refinery, is practically a complete village for important employes. The program calls for the construction of housing for 100 families, in addition to 10 houses for the superintendent, engineers, chemists, etc. This construction has been found necessary, first, because the location of the refinery is from 10 to 20 miles from the nearest towns, which are small country villages, and secondly, because the French workman in general does not own his own home and is accustomed to having his housing provided for him when he works for a large industry, even in the neighborhood of the larger cities. It is expected that the total number of employes at the new refinery will be 400, but only the men from the principal departments will be housed in the workmen's village. The other employes, it is expected, will be drawn from the adjacent farming district and nearby small towns.



*General view of new 5,000-bbl. complete plant of Raffineries de la Vacuum Oil Co., S. A. F. at Port Jerome, France*

# Sound Conservation With Co-operation by States Will Bring Stabilization

NEW YORK, Jan. 23.—Sound conservation principles, that may be put into action by the co-operation of only three or four states and the industry, should bring stability to the petroleum industry, in the judgment of Judge C. B. Ames, president of the American Petroleum Institute, who presents a statistical analysis and his conclusions in "The President's Page" of the Institute's Quarterly. The kind of co-operation that is necessary, he asserts, contemplates the preservation of the 350,000 small wells of settled production, drastic limitations on new pools, with accompanying discouragement of wildcatting, and limitation of existing flush pools to market requirements.

His table and analysis follow:

(Figures in barrels)

| Year— | Domestic crude oil production | Stocks end of period— Crude oil | All other | Ttl. all stocks |
|---|---|---|---|---|
| 1927 | 901,129,000 | 379,660,000 | 216,841,000 | 596,501,000 |
| 1928 | 901,474,000 | 391,849,000 | 228,082,000 | 619,951,000 |
| 1929 | 1,007,323,000 | 428,445,000 | 260,721,000 | 689,166,000 |
| 1930 | 898,911,000 | 411,882,000 | 267,203,000 | 679,085,000 |
| 1931 | 851,041,000 | 370,919,000 | 261,391,000 | 632,310,000 |
| 1932 (estimated) | 785,500,000 | 343,250,000 | 252,750,000 | 596,000,000 |

"In 1927, 1928 and 1929 we produced more crude than was consumed as appears from the fact that stocks increased each year," Mr. Ames says. "In 1930, 1931 and 1932 we produced less crude than was consumed as appears from the fact that stocks decreased each year. During the three years of actual overproduction the industry earned a fair profit. During the three years of actual underproduction the industry did not earn a fair profit. During the three years of actual overproduction the price of crude was higher than it was during the three years of actual underproduction. During the three years of actual overproduction the producing capacity of the country was less than it was during the three years of actual underproduction. During the three years of actual overproduction the oil produced was marketed at the posted prices, while during the three years of actual underproduction a part of the oil was marketed at less than the posted prices.

"This sounds all wrong, and yet, as it is true, there must be some explanation.

"In 1927, 1928 and 1929, purchasers of crude stored the excess production. By the end of 1929 stocks were topheavy, producing capacity was increasing rapidly, and the financial depression was on. Uncertainty of control in the Oklahoma City Pool and, later, in East Texas, accentuated the difficulties. This combination of circumstances created the desire to reduce storage, thereby conserving cash and preparing for possible contingencies.

"So much for the past, but what of the present? Today stocks have been reduced to the 1927 level. The cash position of many companies is such that they have been retiring their funded debt prior to maturity, and there is no longer any reasonable doubt about the ability of the

(Continued on Page 31)

# Tentative Plans for New Pipe Lines and Storage Involve Outlay of Large Sums of Money

By ANDREW M. ROWLEY

Manufacturers of oil industry equipment who believed the recent crude oil and gasoline price reductions presaged another period of stagnation in buying on the part of oil companies have been greatly surprised at the inquiries made during the past week or so for material and equipment which will cost considerably more than $1,000,000 for projects planned in the Mid-Continent area alone.

Two companies are considering building new pipe lines from the Oklahoma City Field, one covering a distance of 200 miles and the other 75 miles. It is known other companies are giving serious consideration to the question of transportation of crude oil and gasoline and are comparing what they pay in the way of freight by railroad with what it would cost to construct a pipe line.

Despite the fact there is a great deal of empty storage, several companies in Tulsa and Tulsa territory are displaying great interest in the matter of storage and in deals involving tank farms and new storage. It is understood the Champlin Refining Co. of Enid, Okla., is in the market for twenty 80,000-bbl. steel storage tanks. The Phillips Petroleum Co. recently purchased two tank farms at Cushing, Okla., and other companies are checking up the matter of storage with a possible view of establishing new tank farms or of buying what empty storage might be available at points which fit into their own picture.

### Phillips Considering Expansion

The Phillips Petroleum Co. of Bartlesville, Okla., has been considering several possible pipe line projects. No definite decision has been reached as yet on the lines in question but it is expected the company will announce within a short time its plans for expansion of its transportation facilities. One of the plans under consideration is the construction of a 200-mile 8-inch line from the Oklahoma City Field to Thrall, Kans., and a 6-inch line from Thrall to Kansas City, a distance of approximately 90 miles. The company owns and operates a gasoline pipe line from the Texas Panhandle to St. Louis with an extension to its refinery at Kansas City. The pipe line from Oklahoma City to Kansas City would be a crude oil carrier. The company, at this time, is enlarging its refinery at Kansas City.

Other consideration has been given by the Phillips company to enlarging the capacity of its pipe line to Seminole, Okla., from Oklahoma City; and to the possible construction of a pipe line from Oklahoma City to Cushing where it bought the tank farms. It was also reported the company might build a pipe line from Seminole to Okmulgee, Okla.

It is understood the Wilcox Oil & Gas Co. of Tulsa has been making inquiries of manufacturers of line pipe for quotations on 75 or more miles of 6-inch pipe with a view of building a pipe line from the Oklahoma City Field to its refinery at Bristow, Okla.

### Tide Water to Build Line

The Tide Water Oil Co. is letting contracts for the construction of 18 miles of 8-inch pipe line from its holdings in the Conroe Field in Texas to other pipe line connections. This company also has completed tentative surveys for a pipe line to be laid from the Conroe Field to the Houston Ship Channel, a distance of a little more than 40 miles. This line probably will be 10 or 12-inch. The company has a 640-acre site on the channel adjoining the refinery and terminal of the Shell Petroleum Corp. It is felt the Tide Water may later construct a tank farm and terminal and, possibly, a refinery on this site, although there are said to be no definite plans for these projects in the immediate future.

Transportation costs are a most important factor in oil company operations. With gasoline and crude oil at such low prices it is pointed out about the only branches of the industry now making a profit are the transportation companies. Companies with their own pipe lines enjoy a decided advantage over their competitors who must rely on railroad transportation.

### Transportation Costs Big Factor

This situation was pointed out last week in The Oil and Gas Journal by C. O. Willson. His statement fits so well into the present picture and what a number of companies are considering for the future, it is repeated herewith:

"The recent declines in the gasoline tank car and service station prices has resulted in more and more attention being paid to transportation costs in refinery sales. With practically all grades of gasoline selling on the open market under 3 cents, the cost of rail transportation between the refinery and point of delivery in many sales is more than the refinery price.

"'As long as prices for refinery products, particularly gasoline, continue at anywhere near their present ridiculously low levels refiners and marketers must look to savings in transportation costs for possible profits,' one Oklahoma refiner said last week. This same refiner pointed out that due to the expansion of crude oil and gasoline pipe lines throughout the Middle West and part of the Southwest, there is hardly a major consuming point where the refiner, transporting in tank cars is not at a disadvantage and is practically prohibited in making shipments of several hundred miles.

"The situation in Ohio at present shows how Oklahoma and other Mid-Continent refiners for example are shut out of sales in that territory. The general service station price in Ohio at present is 14 cents, which includes a 5-cent Federal and state tax which means a net service station price of 9 cents. Allowing 5 cents for marketing and 3.564 cents per gallon to cover tank car transportation cost from Oklahoma to Columbus, Ohio, the net back to an Oklahoma refiner would be less than a half cent per gallon. In fact based on some contracts which guarantee the jobber more than 5 cents per gallon for marketing, the tank car basis Oklahoma would be a minus quantity. In addition the third grade gasoline which in the Middle West now represents around 25 per cent of total sales must be taken into consideration. On contracts, jobbers usually buy the third grade at least one-half cent under the regular grade which means additional reduction in the refinery return. The price situation in Ohio is so bad that complaints are heard from refiners who ship from plants located as close as Chicago, western Pennsylvania, West Virginia and Kentucky.

"The competitive situation of Oklahoma refiners improves slightly west from Ohio but cannot be said to be satisfactory at any point east of the Mississippi River where shipments are made in tank cars. In Chicago, which is a base point for the Middle West, the present service station price for the regular gasoline is 14.1 cents which includes taxes of 4 cents making a net service station price of 10.1 cents. Allowing 5 cents for marketing and 2.442 cents for rail transportation, the net back to the refinery is 2.658 cents per gallon. Although this is approximately the same as the open market quotation for the regular grade, it is at least 1 cent too low based on present refinery costs.

### Advantage Over Competitors

"The refiner with plants in the Chicago district served with a gasoline pipe line might be able to absorb this 1 cent through profits in pipe line operation but to the Mid-Continent refiner without these facilities it means a loss in total operating revenue. This condition is more favorable at some points west of the Mississippi and closer to the Mid-Continent. For instance, at Omaha the service station price is 18.25 cents which includes taxes of 5 cents or net service station price of 13.25 cents. Allowing 5 cents for marketing and 2.244 cents for freight the net back to Oklahoma is 6.01 cents. About the same situation applies to Des Moines and some of the other large consuming points based on the regular grade gasoline. Due to this condition many Oklahoma and Kansas refiners are centering their sales activities on points closer to their refineries. The fear is expressed that due to this strong competition that retail prices will be reduced at many of these favorable points and the marketing territory for the Mid-Continent will be further restricted. In this connection several independent gasoline pipe line projects extending from Oklahoma and Kansas refineries north have been rumored. One company which will shortly complete a modern refinery at McPherson is known to have definite plans for connecting its refinery to the Nebraska border where a large truck and rail terminal will be built. This line would result in substantial savings in shipments within Nebraska and points north.

"The significance of savings in transportation are not confined to gasoline. The restrictions in the sale of heavy fuels have been so important that Mid-Continent sales of low gravity material have been largely confined to short hauls. The rail rate on fuels and gas oils from Oklahoma to Chicago is 93.24 cents per barrel and where necessary the Chicago group of refiners have been passing on this freight rate advantage to their customers in their delivered prices so that return to a Mid-Continent refiner attempting to compete would be only a few cents per barrel at his plant."

The city of Rising Star, Eastland County, Texas, is completing its municipal gas system and has tied into 250 meters. The Southwest Gas Co. has been serving the city.

The city of Abilene, Tex., is planning to construct a natural gas line to the Goldsboro gas field in northwestern Coleman County to obtain gas to supply a municipal system intended to displace the Community Natural Gas Co.'s system now supplying the town.

# Another Movement Made in California in Effort to Hold the Present Prices

LOS ANGELES, Calif., Jan. 23.—The attempt to secure effective curtailment in California is a step nearer success as the result of action taken by the Kettleman North Dome Association to conform with curtailment requirements. Kenda has already reduced its current production to the established allowable and will continue to restrict production for a period of 90 days provided, however, that operators in Los Angeles Basin fields do likewise and upon the stipulation that no price reductions in crude oil will be effected during the period in question.

Following Kenda's action Ralph B. Lloyd transmitted telegrams to all crude oil producers in which he said: "We independent producers still have a chance to save our present price structure. The umpire advises us that Kettleman Hills operators have agreed to meet their allotment by a cut of 5,000 bbls. per day. We believe that purchasers of our crude will give their greatest co-operation if every independent producer will do his part to meet this emergency by bringing his production into line with umpire's allotments within the next 24 hours."

Mr. Lloyd, president of the Oil Producers Sales Agency of California, who dispatched this telegram, had previously been elected chairman of the Executive Committee for Equitable Curtailment, succeeding William Keck, who resigned several months ago. V. R. G. Wilbur, of Long Beach, was elected vice chairman succeeding Mr. Lloyd.

The response of producers to Chairman Lloyd's telegram will not be definitely known for another day or so as the week-end holiday delays compilation of daily production figures. It is logical to assume that California production during the current week will be lower than the output for the past seven-day period, due to additional curtailment recommended by Chairman Lloyd.

In view of past experience we may anticipate the usual number of holdouts with the constructive element limiting production strictly to the maximum.

A serious condition exists in the Huntington Beach Field due to overproduction in the town lot area and it will require concentrated effort to revive curtailment in that area. Huntington Beach, with a quota of 19,000 bbls., has been producing 26,000 bbls. per day since January 1. This excess of 7,000 bbls. per day is due to unrestricted production in the town lot area. The situation became so aggravated early this month that major companies found it necessary to open up offset wells to prevent drainage. The curtailment committee is endeavoring to rectify this condition and major companies have informed Umpire Pemberton that they are willing and anxious to resume curtailment as soon as possible but will not permit independent operators to drain their properties by producing in excess of established allowables.

### THOMPSON TO EAST TEXAS

AUSTIN, Tex., Jan. 23.—By designation of the Texas Railroad Commission, Commissioner Ernest O. Thompson will go to the East Texas oil field this week and remain there for an indefinite period in direct charge of the State oil conservation and proration program. He will take up this phase of oil supervision Thursday. "Enforcement is tightening up every day," Commissioner Thompson declared.

# Anticipating Pumping Conditions in East Texas Permits the Careful Selection of Equipment

By L. G. E. BIGNELL
Petroleum Engineering Editor

The East Texas oil fields have presented problems in production ever since their discovery and there have been almost as many opinions as to methods and time for application of mechanical means of securing the oil as there are operators. There are many factors to be taken into consideration when planning pumping plants and the actual expenditure of money for equipment is influenced by many things other than natural conditions in the reservoir containing the oil.

Many companies have already installed pumping units and it has been reported that over 800 of the 9,600 wells in the area have been prepared to produce by some mechanical means. About 250 wells are actually pumping now.

It is reported that the pressure within the formation built up an average of about 20 pounds during the recent 14-day shut down to take bottom hole pressure readings of key wells. This is regarded by some as giving the wells additional flowing life. While this may be true in a general sense it will not apply to every lease or to all portions of the field and it will be necessary to give consideration to the reasons for this increase in bottom hole pressure at the individual wells.

Apparently the principal force acting to increase the bottom hole pressure while the field was off production was water movement. If this is true it must follow that water is now much nearer the bottom of the wells in many parts of the field than it was before the shut down occurred.

This water movement will tend to flush oil into the wells and also to move oil from the western portion of the area toward the eastern. If this has occurred many wells are rapidly approaching the stage when they will produce more than 2 per cent water and the future methods of recovering the oil will have to be changed.

It has been stated that East Texas west edge wells have flowed 60 per cent water and 40 per cent oil, but when this proportion of water to oil was increased it was necessary to pump the wells to secure the oil and water. The limit to production is then determined by the pumping cost and the cost of disposing of the water.

### Equipment Installed

There are a number of companies who have prepared their wells for mechanical production in advance of cessation of natural flowing conditions, and by so doing they have been able to carefully plan their outfits and have them installed in an approved manner.

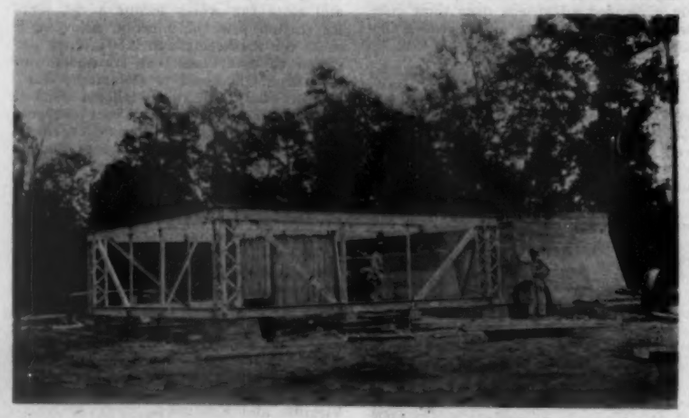
Buying equipment at this time is of advantage to the purchaser because of the lower market price of iron and steel. It is anticipated that there will be increases in the steel market for finished shapes which will be later reflected in the price of pumping equipment.

There is also the possibility that the wells in some areas may go off natural production at a time when it will be very difficult to get to the locations because of high water and bad roads. This situation would mean an enforced shut down of the wells until the water and mud disappeared and might entail a considerable loss in production of oil.

Knowing that their wells would have to be placed on the pump at some time the Superior Oil Co. of California decided to equip 35 of its wells located in the East Texas Field with carefully designed and installed pumping equipment. Since these installations tentative plans have been made for several additional wells to be similarly equipped in the near future.

This contract for equipment was placed with the Continental Supply Co. and built by Emsco Derrick & Equipment Co. and the Falk Corp., with the electric apparatus furnished by General Electric Co. The concrete work was done under the supervision of Dewey T. Ross, construction engineer, Tyler, Tex.

The installations are all designed along the same general lines and the same type of equipment used, the only difference being in changes necessitated at the wells located in low ground and on two such wells it was necessary to install combination steel and concrete substructures. Engineers for the Superior Oil Co. supervised all this work and the excellent type of outfit indicates the care and attention given to details which will result later in lower maintenance expense and promote greater interest among the production men in taking proper care of their wells.



*Construction work on foundation for derrick and pumping unit located on low ground in the East Texas field. This work was done by Dewey T. Ross, construction engineer, Tyler, Texas for Superior Oil Co.*

### General Specifications

Although most of the equipment is of conventional design there are some unique ideas incorporated in both its design and hookup which are given in some detail in this description and will be of interest to other operators.

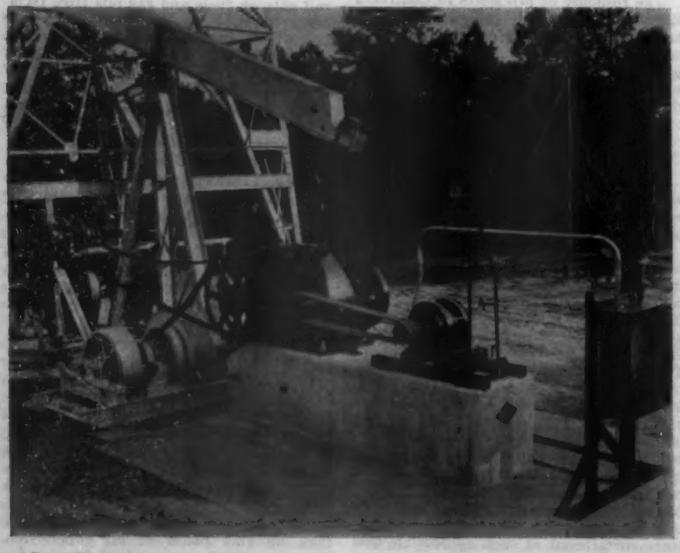
At each well there is an Emsco drilling type steel derrick, most of them being 94 feet high, but at least eight are of the 122-foot type and all are mounted on concrete foundations and have concrete floors with walkways and foundations for pumping equipment also of concrete construction. This makes the rig fireproof and should add materially to its term of life and eliminate insurance charges.

Each derrick is complete with crown block, galvanized samson post, straight lift type walking beam, fully enclosed dustproof oil bath center irons, steel pitman with fully enclosed self-aligning wrist pin bearing, hoist headboard and hoist post braces and counterbalance with guard rails.

The pumping equipment consists of an Emsco-Falk double reduction gear unit equipped with flywheel, brake, hoist driving sprocket and Emsco crank counterbalance with extra weights and with taper fit wrist pin.

The power is supplied by General Electric motors mounted upon Emsco universal motor slide rails which are designed to accommodate any type of motor, including large variable speed clean-out motors for deeper drilling or servicing the wells.

An Emsco 46-inch stationary type production hoist is included at each well with single brake and high mounted drum. The drum shaft is extended to accommo-



*View showing sand reel, hoist and rotary machine drive with electric motor and accessories installed at Superior Oil Co.'s No. 10 L. C. Ingram well in the W. E. Pasteur survey, East Texas oil field*

*Light rotary machine used for clean-out work in the East Texas field showing hook-up with hoist. For use the well head connections are removed and the rotary turntable moved back over the hole*

date clutch rotary machine driving sprocket or clutch tug wheel for bull wheel drive with jack posts drilled for line shaft boxes.

Although the motors, controls and V-belt drives have not yet been installed at all wells, it is intended to use General Electric 15-25-40 horsepower 1,200-1,200-1,200 r.p.m. Y-delta internal delta triple rated constant speed induction motors for pumping and servicing the wells.

Detailed description of the equipment for pumping, pulling rods and tubing, cleaning out and drilling deeper with cable tools or rotary outfit follows:

### Pumping

Pumping—As appears probable at this time, this field will be produced under restricted well allowables for some time. Much thought was therefore given to the most economical method of pumping. Recognizing the desirability of holding the demand charge to a minimum, it has been felt by this operator that slow speed pumping using the minimum possible horsepower requirements over a 24-hour period presented the most economical method of operation.

For this reason the triple rated motor has secured favorable consideration, operating as it does at high efficiency and with a good power factor at any of its ratings. It is the present thought to install V-belt drives ratioed to give nine strokes per minute. At this pumping speed the motor would be connected on the 15 horsepower side.

In case a different speed was desired, a simple change of one of the V-belt sheaves can be made. In case of heavier pumping loads at some later date, due to raising of the allowable or water intrusion, the motor can if necessary be connected on the 25 horsepower side or under possible extreme conditions on the 40 horsepower side, but the 40 horsepower top rated motor was selected primarily to meet the horsepower requirements of pulling rods and tubing rather than with the expectancy that such a rating would be required for pumping.

### Pulling Rods and Tubing

Pulling rods and tubing—Feeling that it is desirable on its leases, Superior Oil Co. has equipped every well with a production hoist so that it is self-servicing rather than dependent on portable winches or tractors.

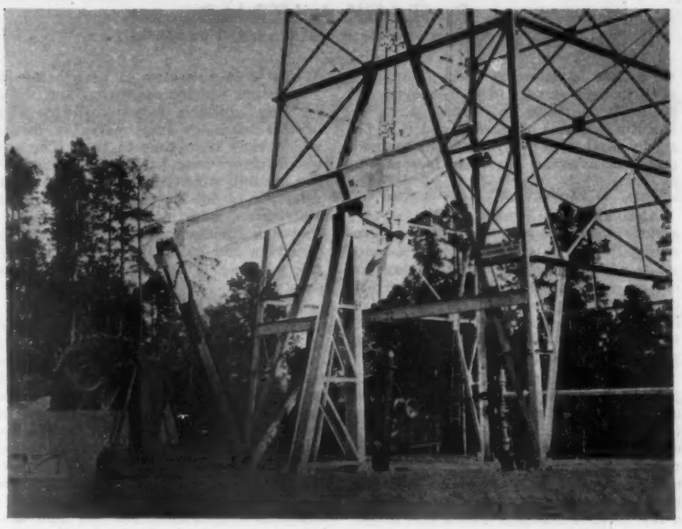
These hoists are of the single brake type with two speeds available through having a double sprocket clutch and shifting the driving chain from the larger to the smaller sprocket or vice versa.

The hoists are mounted permanently in the derricks with steel jack posts and steel headboards, and have been designed with proper brake, line and horsepower capacity for this service in this field.

V-belt drives have been worked out to accomplish a crank speed of 30 r.p.m. for pulling on the 40 horsepower motor connection. This has been accomplished by mounting a permanent hub on the high speed unit shaft to which can be readily attached a seven-groove 12-inch P.D. sheave for pulling or a three-groove 40-inch P.D. sheave for pumping at 9 r.p.m.

The chain drive from the gear unit is then to the hoist line shaft, and two selective hoisting speeds are available by clutching. The drum shaft is equipped with a rotary drive sprocket and this drive combination, with the Emsco D rotary machine equipped with a quill type clutch sprocket, completes the rotary lineup.

Separate slush pump units would be provided.



*One of the Superior Oil Co. of California's 28 wells in the Willow Springs area, Gregg County, Texas, which has been standardized. Concrete foundations have been constructed for pumping equipment on all of these wells, making an exceptionally neat appearance*

The motor will be equipped with a seven-groove 9-inch P.D. sheave only, three belts being utilized for pumping while seven belts are used for pulling. Two or three of the unit pulling sheaves and extra sets of ropes would be carried as rod gang tools.

### Rotary Cleaning Out Or Deepening

Rotary cleaning out or deepening—One of the unique features of these production hoists is the manner in which they can be readily transformed into light drawworks with rotary machine drive.

The jack posts of each hoist are drilled for line shaft boxes.

In case it is desired to clean out with rotary tools, a double brake drum is substituted for the single brake drum and a line shaft is bolted in place. The design is such that this is accomplished readily and quickly.

One line shaft, double brake drum with drum shaft and the rotary machine is all that is needed to convert these outfits to rotary clean out or drilling in rigs. The double brake drum has sufficient line, brake and horsepower capacity to handle the required amount of drill pipe for the East Texas area.

A heavier variable speed motor would be substituted for the pumping and pulling motor, mounted on the universal motor slide rails, and a V-belt drive of greater horsepower capacity would be substituted for the pumping and pulling drive.

### Cable Tool Cleaning Out Or Deepening

Cable tool cleaning out or deepening—In case cleaning out or drilling deeper is preferably done with cable tools instead of rotary, this equipment is as readily adapted to that method as it is to the rotary method.

A clutch tug wheel is mounted on the extended hoist drum shaft and a set of bull wheels installed.

The gear unit chain drives the hoist drum shaft and regular bull rope drive is used from there to the bull wheels. While the bull rope drive centers are approximately 24 feet instead of the usual approximately 36 feet, this shorter center is compensated for in part by the greater arc of contact of the bull ropes on the tug and bull wheels. The bull rope wear occasioned by the ropes rubbing together at the point at which they cross, is largely eliminated by the tilt of the tug wheel mounted on the tilted production hoist shaft, greatly reducing the pressure of the ropes upon each other at their crossing point.

A sand reel is mounted between the gear unit and the production hoist, and is chain driven from a second sprocket on the rear of the crankshaft of the gear unit. This sand reel can also be used if desired for bailing with the rotary lineup.

As in the case of rotary cleanout, a heavier variable speed motor with heavier V-belt drive is substituted for the pumping and pulling motor and drive.

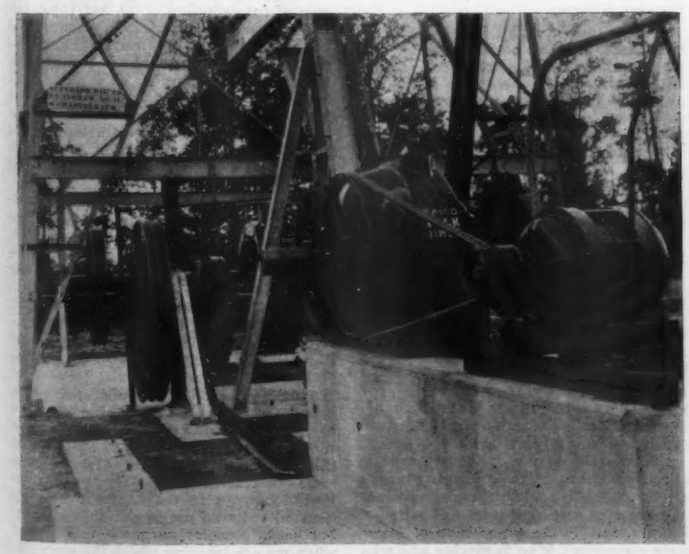
Any type of prime mover can be used and accomplish the above functions on either rotary or cable tool work without a reverse clutch and give the proper direction of rotation to the equipment.

This feature of flexibility in selection of any type of prime mover for powering these outfits permits the operating company to adopt them to practically any condition that will be found in the East Texas or any other oil field. In making plans for the use of this type of equipment it is usually possible to predetermine the type of power to be used and make layouts of foundations to accommodate the necessary prime movers.

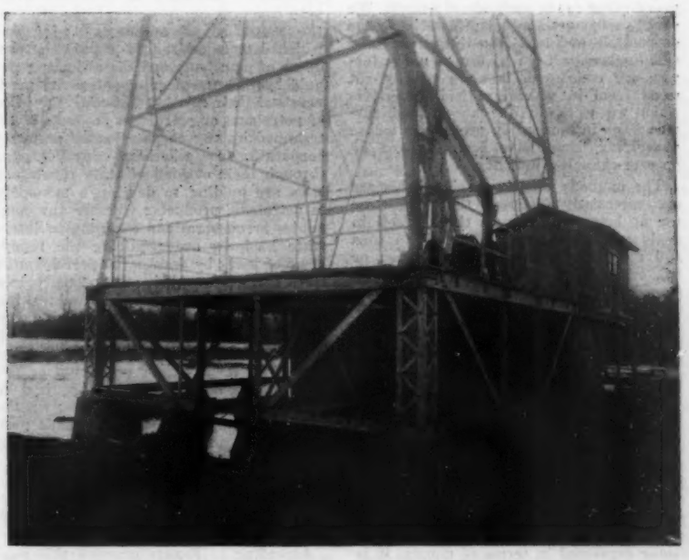
### Supervision

This work was all done under the supervision of the engineers for the Superior Oil Co. of California who were assisted by the engineers for the Continental Supply Co. and the Emsco Derrick & Equipment Co. and the Falk Corp. Actual installation was under Dewey T. Ross and great care was given to each detail to insure alignment of parts and permanency of the work.

The units are excellent examples of what can be accomplished under present conditions in the oil industry by a combination of the engineering forces of producer and manufacturer in a study of the problems of the oil fields and it is believed that the lowering of production costs at these wells in the future will fully justify the outlay at this time.



*Bull wheels driven by tug mounted on hoist and driven through clutch. Note quill mounting of V-belt unit sheave using fewer ropes than for pulling drive. Installed at Superior Oil Co.'s No. 11 L. C. Ingram well, W. E. Pasteur survey, East Texas field*



*Complete outfit mounted upon structure to place well connections and equipment above high water level. This type foundation is used in low land in the East Texas field and this particular installation is on property of the Superior Oil Company*

# Evaluation of Foreign Producing Oil Properties Requires Consideration of Many Factors

By FRANK A. HERALD
Consulting Petroleum Geologist and Engineer, Fort Worth, Tex.*

In order to get you men in the proper frame of mind for this discussion, I suggest that you consider the problems of an appraisal engineer when he undertakes the valuation of petroleum properties in a foreign field.

In considering the value of a petroleum property in a foreign field, we are at once forced to the realization that all, or nearly all, of the rule-of-thumb methods which we commonly use in this country are useless or nearly useless. Of course, as technical men, we do not depend on the rule-of-thumb methods—but they do serve us as general checks and also to let us know about how members of the old school in the industry will be impressed with a particular proposition. Commonly nontechnical men must concur in our valuation in order to get action—and such men generally form quite positive ideas on the basis of methods which we recognize as not sufficiently accurate.

But when we go into a foreign field, those methods simply do not fit—or at least it would require about as much figuring to adapt them as it would to work up a valuation on basic facts. Some of the old rule-of-thumb methods can be fairly readily converted so as to enable their use with the units of quantity and units of money of the particular country. For example, the obsolete method of valuing property on the basis of multiplying the number of barrels of daily production by a factor in dollars, variable according to the assumed future price of oil, may be stated for general application as follows: The value of a producing property is determined by multiplying the number of units of quantity produced daily by 1,000 times the price per unit.

### Basic Facts Must Be Obtained

We cannot roughly compare the property under consideration with some similar property which we have known to have made so many dollars per acre, or so many dollars per well. That commonly used, vague factor of lifting costs at so many cents per barrel does not even come up to be knocked down. And so it is with many other crude methods of attack. We simply must get the basic facts in so far as possible and look into the future. The meaningless past, in so far as many factors are concerned, is more readily got away from in a foreign field than it is when we work in our accustomed surroundings influenced by precedents whose underlying bases have been changed by an ever-changing industry.

The methods used in foreign fields are not essentially different than those we use at home whether we think of oil in pools and money in rubles; oil in tons and money in marks, francs, kronen or lei; oil in barrels and money in pounds, pesos or dollars. However, in the valuation of properties in foreign fields, we must give much thought to factors which here we hardly consider. Governmental laws and regulations affecting the marketing of our production, relationships with employes, the conduct of certain specific operations, and the like, require analysis in terms of money—whatever the money might be—in foreign fields, while at home, until recently, we have given little thought to such factors in making valuations. Even the stability of government, in making valuations in most any foreign country, must be entered as a factor expressed in terms of money. It is our problem to arrive at the present worth of anticipated profits, and that we cannot do unless we properly appraise such hazards as may exist. Geologists are gradually learning to express geological hazards in terms of money, and it is but a step farther to apply the same methods to the many other uncertain factors.

### A Method of Valuation

Although the detailed methods vary greatly from property to property, generally, I start by making a reconnoissance study of the property and then lay out one or more summary sheets with vertical columns corresponding to periods of time in the future—the immediate future by months and the more distant future by years.

Our problem is to get the differences by periods between receipts and disbursements and then reduce those differences to present worth. But before we can make estimates of receipts and disbursements, we must formulate a program of development and operation. Accordingly, we enter at the upper left margin of our sheet a few general headings which will reflect an anticipated program.

Generally it is well to make a separate sheet for each hypothetical program. While it is necessary to keep before us the factors which remain constant, usually it is advisable to enter in the body of this summary sheet only the factors which vary from time to time. The constant factors may be entered directly in the heading or entered in the heading by reference to one or more separate sheets. Entries are made, of course, only after a thorough understanding of all pertinent contracts and only after a realization of the meaning of all available geological data.

### General Data

The first heading in the summary sheet is "number of wells producing" and a corresponding number is entered in each time column. Then come in order the following headings: "New wells," "gross production of gas," "net production of gas," "price of gas," "gross production of oil," "net production of oil," "price of oil." Other headings are generally required for particular properties. These headings should summarize the variable elements determining receipts and disbursements and should be based on all available data.

The entries in the time columns opposite these general control headings constitute a large part of the basis of the valuation. Upon the knowledge and skill of the engineer making the entries depends the value of the result.

Fortunately, through the development of the science of geology, the quantity factor is becoming subject to quite satisfactory estimates. Even where data are meager, we now have really sound methods for appraising the uncertainties, and where development is considerably progressed we can estimate quantities to a degree of accuracy commensurate with estimates in business enterprises generally. All of you who are called upon to make estimates for future production, doubtless have compared your estimates from time to time with records of actual production and generally found them to be remarkably close.

In my own experience, just last week the production records became available for comparison with an estimate over a period of 26 months. The actual production for that period of 26 months was .8 per cent over my estimate. For the first 14 months the actual production was less than .3 per cent over my estimate.

The quantity factor is definitely subject to scientific analysis, and, although we cannot generally come so near to actual behavior as in the case just cited, we can at least scientifically appraise the uncertainties and put this factor on a sound basis—although we may recognize wide possible limits of variation. In such cases, we realize the probabilities and we appraise them.

### Prices

But what about that other important factor standing up there at the head of our summary sheet? I refer to price. The leeway in prognosticating future prices of gas from given petroleum properties seldom give cause for serious concern, but with oil, the varying results under the probable leeway in the price factor are astounding. To me, the variation is awe-inspiring.

Future prices are all-important, yet so disgustingly intangible. In times past, I have given considerable study to prediction of future prices of oil, but the determining factors are of such nature that the results are not satisfactory even should the best guess check closely with subsequent behavior. A wild guess that happens to hit is still a wild guess. The most thorough study results only in a guess, that is, within certain limits, and those limits are so wide that they make enormous differences in the valuation of a petroleum property.

I generally solve the problem by submitting a series of "bottom figures" based on various price schedules. Of course, we must arrive at a best guess, and have the courage to back that best guess, but we should not be silly and pretend to know that which we know not. Generally, I choose to share the responsibility relative to this factor, and set up analyses showing the results under various price schedules. Of course, practically none of the factors in a valuation of petroleum properties is absolutely definite, yet price is so important and yet so intangible that, in my opinion, we are justified in singling it out in this manner. There is some consolation in the fact that prediction of future prices of commodities other than oil is by no means an exact science, but such consolation gives little relief when we are laboring under the responsibility of arriving at a definite sum to represent our opinion of the value of a given property.

In this brief paper, I cannot spare

*Before Fort Worth Geological Society, Fort Worth, Tex., January 23, 1933.

# Senator Thomas Asks Inquiry of Price Cuts and Other Phases of Business

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Jan. 23.—The Federal Trade Commission is directed by a resolution introduced by Senator Thomas of Oklahoma to transmit to the Senate at once the fullest information now in its possession and to make further investigation on the following subjects: The cause of the recent cut in the price of petroleum and petroleum products; the reason for the drop in crude oil prices in 1931; the explanations of fluctuations in the price of petroleum products contrary to the normal operation of the laws of supply and demand; the base which determines the price paid the producer of petroleum and the ultimate price paid by the consumer of petroleum products and their relation; whether the price of petroleum or petroleum products is determined by any corporation or group of corporations; whether any groups through their evasion of state regulatory laws are tending to develop a monopoly in petroleum products; whether any companies or corporations engaging in interstate business are requiring the repayment of loans by delivery of petroleum at rates fixed below their own posted prices or below the market price, thus breaking that market price and demoralizing the industry; whether any person, persons or corporation is guilty of purchasing, transporting or disposing of petroleum or petroleum products produced or acquired in violation of state regulatory laws; whether unfair competition is being made possible by unfair charges on transporting petroleum or its products or in any process of refining or distributing them, enabling any corporation to enjoy an improper advantage over competitors who are not guilty of such practices.

According to Senate practice this resolution will be adopted. Accompanying it is a statement by Senator Thomas saying a congressional investigation of the oil business throughout the country might reveal influences which are responsible for delaying our return to prosperity.

"The announcement of a sweeping cut of the top level of 77 cents to 52 cents per barrel not only involves the ruin of countless numbers of small companies and individuals, but means that hundreds of thousands will be utterly impoverished and the one industry which, in the words of the Federal Oil Conservation Board, was leading the way back to prosperity is being so handicapped that its face is turned toward a deeper depression," said Senator Thomas.

He continued: "This is the logical development of the business policy announced last year by the Gulf company that it was taking advantage of the depression to acquire the properties of its ruined competitors. Much bootleg crude is moving secretly at still lower prices.

"Cheap crude is made into cheap products that have a far reaching effect in demoralizing the market for refined products. Gasoline prices have been chiseled by cut price crude, by gasoline tax evasion and by abnormally wide marginal contracts until they are lower today than they were when crude sold in 1931 at the lowest prices in many years.

"The Federal Trade Commission is on record as having declared that prices are fixed by the Standard Oil. If, as claimed by Mr. Ellison as well as by others, many purchasers are 'openly buying below our prices,' does this indicate that the Standard Oil group is losing its grip? Why are producers selling below the posted price?

"To secretly move a sufficient quantity of crude oil to upset the price structure is utterly impossible without the connivance of great pipe line companies and refiners. Where, then, is the supervision of interstate commerce? Who is moving and who is buying this bootleg oil? Who is producing this excess gasoline? Gasoline prices are not declining throughout the country at large."

much time in presentation of fallacies, but in connection with this disgusting price factor, I want to mention a fallacy that I fear has led many valuations to go awry. Appraisers have recognized the impossibility of scientifically forecasting price and thrown up their hands by saying: "Oh, we do not do any guessing as to future prices; we simply take the price effective at time of valuation." The fact that a certain price is effective today, is small argument that it will prevail throughout the life of the property; or even tomorrow after 7 a. m., as exemplified by recent experiences. This fallacy might lead to no great damage if oil price fluctuations simply correspond with the fluctuations in the general purchasing power of money, but such is not the case.

**Receipts and Disbursements**

After we have made the entries to serve as general control, we are then ready to proceed with our estimates of receipts and disbursements. We set up subheadings under receipts and under disbursements to fit the particular property, and then opposite each of these subheadings we enter in the time columns the amounts of money corresponding to each.

Every entry must be based on the available facts and sound reasoning. The engineer who "picks his figures out of the air" is doomed to failure. The supporting work sheets should show the basis for each entry.

The various geological factors are basic and control the entries opposite many of the subheads. Generally at times when we are called upon to make valuations, the geological conditions are only partially known. Such facts as are established may reduce the range of probable conditions to narrow limits, or, on the other hand, such range may be so great as to be the dominant feature in the valuation and reduce to relative unimportance many of the other factors.

Usually the limits of the range of possible geological conditions justify the making of two or more general analysis sheets in the course of the study, and under some circumstances it may be well to submit such various sheets in a report. However, it is usually our job to come to a single "bottom figure."

We are the ones qualified to appraise the probabilities, and we must recognize this fact and meet the problem. While it is our fundamental duty to present a true picture, we must avoid exaggeration of the uncertainties. Presenting too many details based on rare possibilities may lead to misinterpretation. We need to study such possibilities and clearly understand their effects, but generally we can more accurately convey the picture in a few paragraphs rather than by including many schedules in our report.

Now let us briefly mention the various subheadings usually required under the general headings of receipts and of disbursements.

**Receipts and Disbursements**

We usually find that the anticipated receipts are to come from oil sales, gas sales and salvage, and occasionally we find that certain properties promise receipts from casinghead gas sales, water sales and the sales of certain types of services. We set up the subheadings to fit the particular property and then opposite each we enter in the time columns the amounts of money corresponding to each.

Anticipated disbursements are of two general classes, investments and expenses. While the distinction between these two classes, as to certain items, may be fixed by laws, general accounting practices, or customs of particular companies, it is not essential that we follow any of these in our effort to determine the actual worth of a property under consideration. Of course, as to certain items of anticipated outlay, taxes for example, we may be forced to give special consideration to the classification of certain other items, but that can be done apart from the summary sheet if necessary.

Following are the items which for most properties we set up as investments: Establishment of title; general improvements; wells, including drilling, shooting and installation of equipment; deepening of wells; roads; damages for well locations, roads, buildings, etc.; engineering, geological, civil and mechanical; and under equipment we have well equipment, tanks, power plants, pipe lines, livestock and vehicles, miscellaneous tools, machine shop, telephone system, water system, drilling equipment, buildings, furniture and miscellaneous equipment for field office.

Please note that this program does not comprehend insertion on our summary sheet of values of the items of the present inventory, but merely of the anticipated additions thereto. A vertical informational column headed, "At Time of Valuation," and appearing just to the left of the series of time columns, may well be used to indicate inventory, but the entries therein are not to be carried into the final summation.

For many of the items of investment, we need to set up an item called "investment insurance." While this does not represent an actual anticipated expenditure, it is properly included under disbursements in valuation estimates. It is an expression of the chance factor; the chance that the investment might not be returned; the chance that, subsequent to the expenditure, developments might be such that the cost, or a part thereof, of the item must be written off as a loss; that the cost of the commodity or service cannot be returned through anticipated production.

(Continued on Page 32)

# Railroad Commission Adjourns Its Probe Into Proration Observance in East Texas Area

By L. E. BREDBERG

TYLER, Tex., Jan. 21.—The Texas Railroad Commission, investigating alleged violations of its proration orders in the East Texas oil field, adjourned its hearing here this afternoon, subject to call. Today's session was occupied largely in the investigation of oil carried by pipe lines in the field without the E-N form reports required by the commission and showing specifically the origin of the oil. These E-N reports are designed to reveal any overproduction.

Witnesses from the Pure Van Pipe Line Co. and the Liberty Pipe Line Co. testified that those lines transported East Texas oil last year not covered by E-N forms.

W. W. Averill of Beaumont, vice president of the Pure Van Line, said the oil the company ran came from the Liberty Pipe Line Co. and was run only on the assurance of Liberty officials that it was legally produced oil.

Mills Cox, vice president of Liberty, said his company had accepted oil from the Tyler Pipe Line Co. and that the latter organization had declined to make E-N reports because it had a Federal injunction restraining the commission from interfering with its business.

Liberty counsel, said Cox, advised him under the circumstances to accept the oil for transportation.

Cox went on to say that the Federal injunction of the Tyler Pipe Line Co., although restraining the commission from interfering with the company, likewise had directed it not to produce in violation of the commission regulations.

"I feel I was justified in presuming that oil tendered us by Tyler was produced in compliance with that injunction," the witness said.

**Appeared "Physical Impossibility"**

Mr. Averill said it appeared to him it would have been a "physical impossibility" for Liberty to furnish a form showing the specific origin of the oil in question, since Liberty had obtained it from the Tyler Pipe Line Co. The question just how far back persons tendering oil were required to trace it was brought up.

Commissioner E. O. Thompson said it was the intention of the commission to require the E-N form to follow oil through all transactions through which it might pass. For example, on oil produced and tendered first to one pipe line and then to another, each company or individual handling it in its various steps to the market would have to attach an E-N.

Mr. Thompson announced that the rule requiring meters to be placed on pipe lines and the like would be broadened to require that they be placed at every direct outlet for oil to market on pipe lines, gathering systems, loading racks and wells at which oil is sold and carried away in trucks.

J. M. Shaw, oil landowner near Overton, who complained of proration enforcement said he had no specific charge to make, but told of an instance where he said he had noted a stop clock attached to a well apparently for use in an irregular manner and said he had reported it to the commission agents but had "got no action so far as I know." He also complained of what he described as delay on the part of proration officials in granting permits to drill wells.

**Conflicting Views on Price Cuts**

The session was the closing one of a three-day sitting of the commission. At yesterday's sitting conflicting views on recent price cuts on East Texas crude were heard.

Attorney General James V. Allred and his assistants undertook to show that heavy withdrawals of oil from storage by major companies had been responsible for the recent break in prices to 50 cents a barrel.

One witness, Charles F. Roeser of Fort Worth, president of the Texas Oil and Gas Conservation Association, denied this, saying that "distress" oil available from wells without pipe line connections and "cut price" gasoline were largely responsible. Mr. Roeser declared he thought the enforcement of proration in East Texas was lax.

"Do you believe in further curtailment?" asked one attorney. "Yes," answered Mr. Roeser. "Cut in all pools until they suffer for oil."

"If gasoline stocks were reduced, would it not help retain the price of crude?" was asked. Mr. Roeser answered in the affirmative. This question was asked when Mr. Roeser stated that there were great stocks of gasoline on hand.

Further inquiry into storage and prices brought out the answer that hundreds of cars of gasoline going out of East Texas at 1¾ cents per gallon was reason for the price of crude falling. The witness was asked if a change should be made in the commission and he answered that if conditions are not better in East Texas a change should be made. He said experienced men should be put in the field by the commission.

"Don't you think the price cut at the present time will influence the breaking of proration orders?" asked one questioner. Mr. Roeser answered that he thought not, but that proration will be stronger than ever after this "flurry."

**Too Many Drilling Permits**

Mr. Roeser also complained that the commission had granted too many drilling permits, giving as example a permit granted on a small offset tract to a lease he held. He said he had made complaints to the commission but no improvement had been observed.

Mr. Roeser, questioned by Mr. Allred, said he would favor creation of a new conservation commission, to be appointed by the governor, "if conditions are not improved in East Texas." He added that he was not charging that the commission itself was inefficient but that its organization was.

One of the developments of the day was the receipt of a telegram from R. S. Ellison of the Stanolind Purchasing Co. in Tulsa, which led the recent East Texas price cut. Mr. Ellison made no mention of accepting the commission's invitation to come here to testify concerning overproduction which he had mentioned previously as the basis for the price cut.

In the telegram Mr. Ellison said his sources of information were "necessarily" not as good as those of the commission and he added that if the present allowable were held up it would be "most helpful."

On Thursday the commission had wired Mr. Ellison asking him to come to Tyler and give any information he might have about overproduction. The telegram read: "Newspapers quote you as giving as the reason for your price cut in crude that great quantities of illicit or overallowable oil was finding its way into the market. The railroad commissioners of Texas believe very little overproduction now is being done in Texas and that it is decreasing every day. We vigorously are investigating that question right now at Tyler, Tex., and earnestly request you or some informed representative of your company to appear promptly at Tyler and help us stop this alleged overproduction by telling us what you know about it. We are going to stop overproduction and need your testimony on alleged conditions."

Sam Ross, president of the East Texas Oil Landowners' Association, was summoned to testify after the commission received information he had been quoted in the State House of Representatives as authority for certain charges of irregularities in the enforcement of proration in the field. Ross took the stand and denied being the author of such charges.

"Do you have any evidence in your knowledge of dereliction of duty on the part of commission employes?" Attorney General Allred asked him.

**No Charge to Make**

"No, sir," the witness replied. He added that he had no charge of nonco-operation to make against the commission or the Attorney General's Department.

The Atlantic Pipe Line Co. explained at the Thursday afternoon session—to the apparent satisfaction of everyone except Jack Blalock of Marshall, assisting the Attorney General's Department—the reason for the alleged discrepancy of more than 1,000,000 bbls. of oil handled by it from September 1, 1931, to January 1, 1933.

Atlantic officials insisted that receipts at Gulf terminals were not the figures which should be used.

Commissioner Thompson made an effort to determine whether or not the 1 or 2 per cent "strapping charge" to cover evaporation and other loss of oil handled by the Atlantic was excessive, saying that in Texas the state loses taxes on approximately 9,000,000 bbls. a year on that basis and that producers have complained the allowance is excessive. This is provided for under Rule 9 of the commission.

The question arose when figures of the pipe line company showed 357,443 bbls. of oil on hand January 1, 1933, not accounted for otherwise than the use of 98 and 99 per cent tables under Rule 9.

Many other witnesses have been subpoenaed to appear at the hearing, with pipe line companies' records to be scrutinized by the commission or its attorneys.

# Wide Variety of Bleaching Clays in United States to Satisfy the Needs of Petroleum Refiners

By P. G. NUTTING*

There is an abundance of bleaching clays of the highest grade in this country but general knowledge as to their location, behavior and uses is limited and considerable bleaching clay is imported. Two years ago a systematic study of the properties of such clays was undertaken by the U. S. Geological Survey. A preliminary report on the chief commercial bleaching clays and methods of studying their properties was published in the January 15, 1932, number of Industrial and Engineering Chemistry. This article is a summary of the more important results obtained since that time.

Of the naturally active clays, the bulk of the production, amounting to upward of 200,000 tons annually, is from an extensive group of deposits 100 miles long and 30 miles wide astride the Georgia-Florida border. Clays from these deposits are low (0.7-0.9) in bleaching power but are valued because they may be prepared in granular form for percolation and may be reburned for reuse. The Japanese active clays which I have examined rate about 1.3 and the imported English "fuller's earth" 1.2, both in powdered form. The Japanese and Florida clays are not improved by acid leaching but the bleaching power of the latter clay may be raised from 0.7 to 1.2 by dialysis and to 1.8 by a special cation treatment. There is a naturally active, magnesian clay, mined in Nevada near Death Valley, which rates 1.8 merely dried and ground but only 1.2 after the acid leach. Naturally active clays are mined in central Georgia and near Creede, Colo., chiefly for the cotton oil trade. It is said to cost less than $5 a ton to mine, dry and mill a clay in a modern plant. Freight charges are being reduced on this class of material (billed as "ground clay"), the higher rates on treated clays being retained.

### Activable Type Clays

Clays of the inactive but activable type are largely bentonites, originally volcanic ash but decomposed and partly leached. These are widely distributed and each bed covers a large area, but is usually too thin to be of commercial interest. One horizon characterized by probably discontinuous beds of bentonite extends from Canada to northern Alabama but is only 2 feet thick in eastern Tennessee and northern Alabama and 5 feet at High Bridge, Ky. Many western deposits are much thicker.

Where bentonites have been carried and redeposited by water, they are usually mixed with ordinary clay and silt. Most of the Oklahoma and Texas activable clays appear to be of this character. While pure bentonites such as those from near Otay, Calif., Chambers, Ariz., and Westcliffe, Colo., activate to a ceiling of 2.0 these Mid-Continent impure bentonites activate to 1.3 to 1.7.

In some other bentonites the decomposition has not progressed far enough to render them readily activable. Either the volcanic ash was originally too silicic or the climatic and other physical conditions were not favorable for a decomposition to a highly activable type of clay. Those of Wyoming, South Dakota, western Montana, and Alberta, appear to be chiefly of this class. No naturally active or commercially activable clay from north of the latitude of Richmond, St. Louis and Salt Lake has yet been found. The fuller's earth of Massachusetts is a fine quartz silt which does not bleach oil. There are indications that the naturally active Death Valley clay may be a bentonite that has been altered to an active state by unusual natural processes.

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## Describe New Process of Activation for Bleaching Clays

**In the accompanying paper the author explains the results of an investigation covering available bleaching clays in United States. The report shows there are plenty of bleaching clays of the highest quality, the best largely unknown and unused. These clays could take the place of those now imported at high prices.**

**The three chief classes of clays—natural active clays, activable bentonites and glauconites—are reviewed in the paper and the properties of the best thirty clays are listed. Finally a new process of activation which brings out the full bleaching power is described.**

Many samples of ferromagnesian igneous rocks decomposed in situ, have been tested which show bleaching power after acid leaching equal to that of the best clays. However, these are commonly too local in character to be of commercial interest. The olivine-serpentine dunites occur in large masses but at best they rate only 1.2 after grinding and acid leaching and there is always considerable variation in quality within a short distance.

### Marine Glauconite

A third possible major source of bleaching material is the very abundant and widely distributed marine mineral glauconite, commonly called greensand. This is a complex ferromagnesian silicate supposed to have been formed off shore at the "mud line" of the ocean in 10 to 100 fathoms of water, probably in connection with animal life (foraminifera), and now found in deposits of varying thickness along the Eastern Coastal Plain. These deposits are described in U. S. Geological Survey Bulletins 660-B and 727. One deposit extends from near New York City across New Jersey and Maryland just above tidewater. Similar deposits occur in Australia and many other localities. Quartz sand and clay are common impurities but area readily removed. The mineral proper varies between the end members.

$2H_2O.K_2O.2(Mg,Fe)O.2(Fe,Al)_2O_3.10SiO_2$

$2H_2O.K_2O.(Mg,Fe)O.3(Fe,Al)_2O_3.10SiO_2$

Glauconite was long used as a natural fertilizer. It has been worked for potash, for iron salts and for silica and is being used as a base exchange water softener. It grinds readily in a flour mill and the raw ground glauconite (300 mesh) is an excellent bleach for cotton oil. For mineral oil (contact process) it must not only be ground but acid leached. It yields readily to acid, going over to a material resembling silica gel, which is not a good bleach (1.0) for mineral oils. Control of leaching through control of time, temperature or concentration of acid is not possible as some grains leach far more readily than others.

In an attempt to limit and equalize the leaching, I added salts to the leaching acids (the chlorides of Fe, Al, Mg, etc. to HCl, or the sulphates to sulphuric acid) and found that the leaching progresses to a maximum activity (equal to that of the best treated clays) and then stops, due apparently to the excess of cations present in the leaching solution. Incidentally I find that the same process is applicable to those bentonites which yield too readily to acids, going over to nearly pure silica. Even the naturally active Georgia-Florida clays are very materially improved by this process of subjecting them to a hot solution of mixed salt and acid. Table 1 gives in outline the effects of various treatments on type clays. The rating given is the ratio of the volume of black crude which is bleached water white to the volume of clay bleaching it. I have no theoretical explanation of the effect of the improved leach but it may be a base exchange between salt and clay, catalyzed and carried farther by the acid.

TABLE 1—EFFECTS OF CLAY TREATMENTS

| | Not treated | Dialyzed | Acid leached | Salt and acid solution |
|---|---|---|---|---|
| Florida clay | 0.7 | 1.2 | 0.6 | 1.8 |
| Bentonite | 0.5 | 0.6 | 1.5-2.0 | 2.0 |
| Glauconite | 1.2 | 1.3 | 1.0-1.7 | 2.0 |
| English earth | 1.2 | ... | 1.6-2.0 | 2.0 |
| Death Valley | 1.8 | 1.6 | 1.2 | 2.0 |

### Behavior of Clays

Bleaching tests of various clays made on reduced cylinder oil, crankcase oil, fish, linseed and cotton oil and on lard have been made in a study of the behavior of the different types of clays. In the tabular report in Table 2, however, the semiabsolute scale of bleaching power on cold crude petroleum is adhered to. For many of the clays cited in this table little is known of the extent of the deposits and the tests reported give only a hint of possible usefulness in the trade.

TABLE 2—CLAY TESTS

| | Bleach: Raw | Bleach: Ac. Ttd. | Acid Sol. | Solution: Fe | Solution: Al | Solution: Ca | Solution: Mg | Weight loss, °C.: 25-160 | Weight loss, °C.: 160-800 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Attapulgus | 0.8 | 0.5 | 18.6 | 4 | 5 | 1 | 1 | 3.2 | 9.6 |
| 2. Quincy | 0.7 | 0.6 | 25.6 | 4 | 3 | 2 | * | 4.6 | 10.5 |
| 3. San Antonio | 0.7 | 1.1 | 11.1 | 6 | 2 | 1 | * | 1.5 | 5.2 |
| 4. Olmstead | 0.6 | 0.3 | 22.3 | 7 | 2 | 0 | * | 2.3 | 5.1 |
| 5. Death Valley | 1.8 | 1.2 | 24.9 | * | 1 | 1 | 8 | 3.2 | 6.2 |
| 6. Tehachapi | 1.1 | 1.1 | 13.1 | 4 | 4 | * | 2 | 5.6 | 7.0 |
| 7. Chambers | 0.6 | 2.0 | 22.6 | 5 | 4 | 1 | * | 6.8 | 8.1 |
| 8. English earth | 1.2 | 2.0 | 19.9 | 5 | 4 | 1 | * | 9.0 | 5.7 |
| 9. Japanese | 1.0 | 1.1 | 14.2 | 2 | 6 | 1 | 0 | 9.1 | 5.3 |
| 10. N.C. dunite | 1.2 | 1.2 | 40.0 | 5 | 0 | 0 | 5 | 4.1 | 9.2 |
| 11. Otay, Cal., Bent. | 0.5 | 1.8 | 31.3 | 2 | 8 | * | 0 | 11.3 | 5.2 |
| 12. Silver Cliff | 0.8 | 2.0 | 30.7 | 1 | 7 | 1 | 1 | 14.4 | 5.6 |
| 13. Westcliffe | 1.3 | 1.9 | 31.5 | 0 | 7 | 2 | 1 | 16.1 | 4.8 |
| 14. Santa Rita | 0.8 | 1.5 | 21.7 | 1 | 8 | 1 | * | 12.2 | 6.5 |
| 15. Laurel | 0.7 | 2.0 | 41.4 | 4 | 4 | 2 | 0 | 16.8 | 6.2 |
| 16. Evansville | 0.4 | 1.3 | 4.7 | 4 | 3 | 3 | 0 | 3.7 | 6.4 |
| 17. W. Tenn. | 1.0 | 1.9 | 27.9 | 4 | 5 | 1 | * | 6.9 | 5.6 |
| 18. Midway | 0.7 | 0.8 | 23.0 | 2 | 2 | 6 | * | 6.6 | 13.3 |
| 19. Commercial fuller's earth | 1.3 | 1.6 | 26.3 | 3 | 2 | 3 | 2 | 6.8 | 10.0 |
| 20. Halloysite | 1.0 | 1.4 | 42.9 | 0 | 10 | * | 0 | 9.4 | 14.2 |
| 21. Woodward | 0.6 | 1.7 | 41.0 | 5 | 4 | 1 | * | 13.1 | 11.2 |
| 22. Saline | 0.8 | 1.6 | 29.5 | 3 | 5 | 2 | 0 | 14.6 | 6.9 |
| 23. Cordele | 1.3 | 1.3 | 15.1 | 4 | 5 | 1 | * | 2.0 | 4.8 |
| 24. Musselwhite | 0.9 | 1.8 | 30.6 | 5 | 4 | 1 | * | 5.4 | 4.6 |
| 25. Fort Gaines | 1.3 | 1.4 | 4.5 | 5 | 4 | 1 | * | 4.3 | 6.0 |
| 26. Chickamauga | 1.0 | 1.9 | 20.7 | 3 | 5 | 2 | * | 2.7 | 7.2 |
| 27. Wyoming Bent. | 0.7 | 1.3 | 19.7 | 5 | 5 | 2 | * | 6.3 | 5.9 |
| 28. N. J. Glauconite | 1.2 | 1.5 | 43.3 | 9 | 1 | 0 | 0 | 1.9 | 5.1 |
| 29. Md. Glauconite | 1.3 | 1.7 | 38.3 | 10 | 0 | * | * | 3.5 | 5.9 |
| 30. Bavarian Bent. | 0.7 | 2.0 | 21.9 | 3 | 4 | 3 | 0 | 11.0 | 5.5 |

*Trace.

Clays 1-9, 11 and 18 are well known commercial clays; 10 is a decomposed olivine rock from near Webster, N. C.; 12 and 13 are pink bentonites from Colorado; 14 is a similar bentonite from Santa Rita, N. Mex.; 15 is a brown waxy bentonite from near Laurel, Miss.; 16 is a green bentonite from eastern Tennessee; 17 is a sedimentary clay, possibly a reworked bentonite from a bank of the Tennessee River sent in by Prof. Walter H. Bucher of Cincinnati; 19 is a "fuller's earth" supplied by a chemical supply house; 20, horny white halloysite from near Rome, Ga.; 21 is from the 5-foot deposit being worked near Woodward, Okla., apparently an impure bentonite; 22, bentonite from Saline County, central Arkansas, submitted by State Geologist J. C. Branner; 23, 24 and 25 are central Georgia clays submitted by Poole Maynard, Atlanta, Ga.; 26 is an Ordovician bentonite, greenish gray, very like shale in texture.

These selected tests well represent the gamut of variation in our American clays. There is a well-defined ceiling in bleaching power (2.0) approached by many of these clays but exceeded by none. Active synthetic mixed oxides approach the same ceiling but are expensive to prepare, hence the market for bleaching clays is unlikely to be disturbed from that quarter. The single clay (No. 5) that is highly active when untreated is so situated as to be only a competitor of the treated clays. Losses on acid treating (5 to 43 per cent) and recoverable by products vary over a wide range.

### Expect Improvements

Two considerable improvements are to be expected in the production of bleaching clays; (1) the development of high grade sources nearer points of consumption, thus eliminating freight charges often over half the delivery cost and (2) improvements in treating to bring out maximum activity. In addition, special oils and fats will always require special clays, specially prepared. Acid treated clays fall off rapidly in bleaching power when exposed to air, this effect should be further studied. Activated alumina and treated slag are particularly susceptible to deterioration of this nature.

Some clays appear to leave the bleached oil more stable in color than others. For each clay there appears to be an optimum temperature of bleaching activity which has been but little investigated. Some clays crack even pure saturated paraffins (such as laxative oil or fused paraffin wax) while others do not. Drying conditions profoundly affect the bleaching power of some clays. Some cease bleaching abruptly while others give a long series of intermediate green, yellow, orange and red oils. The bleaching power of some clays is unaffected by ignition while that of many clays is destroyed. One clay is inactive on hot crude when raw but is highly active after acid leaching while on cotton oil its action is just the reverse. Finally the uses of active clays as catalysts for chemical reactions, as absorbents for the selective recovery of solvent vapors, as water softeners and other useful agents remain to be investigated and developed.

# *Crack or Bust*

"Many of the 145 companies operating refineries without cracking facilities realize that they cannot much longer market straight-run solely and must crack and perhaps engage in some naphtha reforming."—GEORGE REID *in Refiner and Natural Gasoline Manufacturer.*

Just ordinary cracking won't solve the refiner's problem but Dubbs cracking will

Dubbs cracking makes the highest yield of the best anti-knock gasoline from any charging stock at lowest cost—royalty and all And you are safe from patent litigation Your profits won't be taken away from you

Dubbs cracking always pays

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

## Late Fields

### ARKANSAS

SHREVEPORT, La., Jan. 24.—Baker & McMurray's No. 1 Olivet, NE NE Section 4-16-26, Miller County, a south offset to the first commercial well in the district, their No. 1 Back, in the SW SE Section 33-15-16, was completed Saturday flowing an estimated 500 to 600 bbls. of pipe line oil from 2,942 feet in 13 feet of sand the last 2 feet of which were salt water sand. Bottom was cemented off 5 feet and the well washed in with oil performing as stated. After the first 24 hours it was shut in for lack of storage. Hapgood and others' No. 1 Rose, NE SE Section 7-16-26, 2 miles southwest, drilling shale at 3,010 feet, apparently has missed the pay as it is 50 feet below where it should have been found.

### OKLAHOMA

Amerada Petroleum Corp.'s No. 1 Lafoon, NE cor. SE NE Section 9-13-6, a semiwildcat test in Lincoln County, found black oil in the Wilcox sand at 4,178-4,268 feet, making 360 bbls. in 12 hours and it was then shut down. Operations were resumed during the week at the well by pulling the 7-inch casing to allow the oil found in the Viola lime at 4,106-30 feet, to be produced along with that found in the Wilcox sand. The oil from the Wilcox sand tests 21 gravity, corrected.

Campbell and others' No. 1, C SE SW NE Section 17-9-7, Seminole County, found a showing of oil and water in sand at 3,346-71 feet. The owners were drilling deeper at 3,381 feet.

Magnolia Petroleum Co.'s No. 1, in the C SW NE Section 28-7-4, in the Sacred Heart area of Pottawatomie County, swabbed 1,080 bbls. of oil in 15 hours from the Simpson sand at 4,148-96 feet, with a showing of water.

Watchorn Oil & Gas Co.'s No. 1, in C NE SE NE Section 30-6-5, in the southeastern part of Pottawatomie County, found water in the Wilcox sand at 3,695-98 feet and is plugging back to the sand at 2,440-60 feet where a showing of oil was found.

The Lucien Consolidated Community's No. 1 Jerome, C SW SW Section 8-20-2w, in the Wents Pool, Noble County, was drilled 5 feet deeper to a total depth of 5,255 feet, and it made 965 bbls. in the 24 hours ending January 24. The gas is now estimated at 5,500,000 feet a day. It will probably be drilled deeper.

The Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Kolb, C NE NW Section 33-20-2w, Noble County wildcat, was standing at the same total depth of 5,046 feet in dolomite. The oil has filled up in the hole 3,500 feet since the last swabbing test which was Saturday night, January 21. The oil was found in sand at 4,975-5,028 feet. It had sandy shale from 5,028-32 feet and green shale from 5,032-37 feet, and dolomite from 5,037-46 feet.

### KANSAS

The extension well in the Mabee Pool, in McPherson County, the Lee and others' No. 1 Wall, NW cor. SW Section 33-20-3w, which found the Hunton lime at 3,495-3,507 feet, was preparing to take a production test after erecting tanks. Oil was standing about 2,500 feet in the hole.

R. F. Youker and others' No. 3 Eaton, NE cor. Section 26-19-2w, on the west side of the Ritz-Canton-Decker Field, McPherson County, is estimated at 400 bbls. a day from the chat at 2,965-3,030 feet.

The Sinclair Prairie Oil Co. and Olson Oil Co.'s No. 1 Brack, C SW SW Section 17-14-10w, a wildcat in Ellsworth County, has cored two sands, both showing gas, one at 1,250-1,350 feet and the other at 2,095-2,135 feet.

### CHARLES H. HUBBARD DEAD

Charles H. Hubbard, drilling contractor, and former mayor of Tulsa, died in a Kansas City hospital on Monday, January 23. Death was caused by a heart attack.

# Every Division East of California Given Deep Cuts in Recent Price Changes

The producing division of the oil industry was subjected to cuts in the latter half of January that brought prices down to a point so low that it would require research into the dim past of the business to find a scale that would equal it.

The price reductions started on January 18 with the Stanolind Crude Oil Purchasing Co.'s postings, starting at 28 cents for oil below 29 gravity, with a 2-cent differential upward to 40 gravity and over, the highest price being 52 cents. This schedule applied to Kansas, Oklahoma, North and Central Texas and East Central Texas. The company also posted 50 cents for East Texas crude. Its prices were adopted by all companies purchasing in the same territory served by the Stanolind company, the other companies coming in on the same day or within two days afterward.

The Texas Company led in posting new prices for Gulf Coast, North Louisiana and Arkansas, West Texas, Southwest Texas and the Texas Panhandle on January 19. The Texas Company's Gulf Coast prices started at 55 cents for below 22 gravity, with a 1-cent differential up to 40 gravity and over, at 74 cents. The Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co. and other Gulf Coast purchasers on January 20 posted a different schedule in the Gulf Coast, starting with below 20 gravity at 32 cents, with 2 cents added for each degree upward, making 34 gravity and over, 62 cents.

In the Conroe Field in southern Texas the Tide Water Oil Co. posted prices on January 19 as follows: 35-35.9 degrees, 59 cents, with 1 cent added for each degree upward to 40 degrees and over, 64 cents. On January 20 the Humble Oil & Refining Co. posted 35-35.9 degrees, 54 cents, with 2 cents added for each degree upward to 40 degrees and over, 64 cents.

In Southwest Texas the new prices posted were as follows: Refugio, 45 cents; Mirando, 35 cents; Pettus, 55 cents; Salt Flat, 40 cents; Darst Creek, 35 cents; Luling, 30 cents; Lytton Springs, 45 cents, by all companies posting in those fields.

In West Texas, Crane, Upton, Pecos, Crockett, Howard, Glasscock, Ector and Mitchell Counties and Lea County, New Mexico, were cut to 30 cents and Toborg, Pecos County, to 40 cents by all buyers.

The Smackover Field in Arkansas was subjected to a cut to 20 cents per barrel by the Magnolia Petroleum Co. and the Standard Oil Co. of Louisiana and to 30 cents by The Texas Company, Gulf Refining Co. and other buyers.

The Standard Oil Co. of Louisiana posted a schedule in North Louisiana and in El Dorado, Arkansas, in which the prices vary for the same grades of oil in

In the Texas Panhandle, The Texas Company on January 19 posted Gray County crude below 35 gravity at 34 cents, with 2 cents added for each degree upward to 40 degrees and above at 48 cents, and Carson and Hutchinson Counties below 25 gravity 31 cents, with the 2-cent differential upward. On January 20 other companies posted in the same counties but their prices were 2 cents lower on each degree than The Texas Company's prices.

All Pennsylvania Grade oils were cut 15 cents on January 19 and then 10 cents deeper on January 21 by the South Penn Oil Co. followed by other buyers, bringing prices down to $1.47 per barrel in the Bradford and Allegany Fields; to an average of about $1.40 in the Oil City district; to $1.17 in Southwest Pennsylvania; to $1.12 in West Virginia and to 97 cents in southeastern Ohio.

Western Kentucky crude was cut by the Ohio Oil Co. to 57 cents on January 20, and that company also lowered the price of Lima oil to 70 cents; Wooster, 70 cents; Illinois, 62 cents; Indiana, 40 cents; Princeton, 62 cents. The Ashland Refining Co. cut Somerset crude to 45 cents.

In Canada, the Imperial Refining Co. lowered the price of Petrolia, Ontario, crude to $1.60, and Oil Spring, Ontario, to $1.67.

The Stanolind Oil & Gas Co. posted lower schedules in the Rocky Mountain fields on January 18, and the following prices now prevail: Iles, light, 40 cents; Iles, heavy, 34 cents; Dutton Creek, 34 cents; Frannie, light, 31 cents; Frannie, heavy, 20 cents; Grass Creek, 62 cents; Greybull and Torchlight, 62 cents. The Continental Oil Co. reduced Hogback crude to 65 cents, Artesia to 30 cents, Maljamar to 25 cents, and Lea County to 30 cents. The Stanolind Oil & Gas Co. applied the Stanolind Crude Oil Purchasing Co.'s price schedule to the Salt Creek Field, with a range from 28 to 52 cents per barrel.

## Blowout Causes Trouble in New East Texas Field

*One of the batteries of pumps installed to fight the fire at burning well on the Standard Oil Co. of Kansas' Madeley lease in Conroe Field, Tex.*

## Institute Files Protest Against Increasing Tax

WASHINGTON, D. C., Jan. 23.—The American Petroleum Institute has protested against constantly increasing gasoline taxes in a letter to the Department of Commerce regarding the oil industry's outlook for 1933.

"There has been a growing realization that the sales tax on gasoline has exceeded all reasonable bounds and that this burden on the motor car users is diminishing consumption of gasoline, thereby injuring both the petroleum and the motor car industries, reducing employment and contributing to the depression," the Institute's letter declared. "The only just basis for the gasoline tax is support of the highway system, yet this tax is being diverted to various other uses and is so heavy that a premium is put upon evasion.

"The Federal Government for the first time has imposed taxes on gasoline and lubricating oils for general revenue purposes. This is a distinct invasion of a field of taxation which belongs peculiarly to the states, and while it is producing some revenue, it is placing an undue burden upon a limited portion of the population.

"Strengthening of the conservation movement and alleviation of these tax burdens will greatly assist the petroleum industry in making 1933 a better year than 1932."

### A.P.I. BOARD TO MEET

The board of directors of the American Petroleum Institute will meet Wednesday, February 8, in Institute headquarters, 250 Park Avenue, New York. This is the first quarterly meeting of the board in 1933, the date having been decided upon by the executive committee at its meeting January 18. The session will convene at 10:30 a. m.

### BILL FOR NEW TEXAS BOARD

AUSTIN, Tex., Jan. 24.—A bill to strip the Railroad Commission of supervisory powers over oil and gas and to create an appointive board of natural resources was offered in the Texas legislature Tuesday by Representatives Holloway, Dunagan and others.

### LON SMITH CHAIRMAN

AUSTIN, Tex., Jan. 23.—Lon A. Smith has been named chairman of the State Railroad Commission in accordance with the policy to rotate the chairmanship among the three members.

C. V. Terrell is the immediate past chairman.

In his first statement, Chairman Smith said that "most splendid harmony and an abiding co-operation obtains in our commission, permitting us to give to the public a progressive program and a constructive administration."

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# The Oil and Gas Journal

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## A Remarkable Year

This Annual Number of The Oil and Gas Journal reviews one of the most remarkable years in the history of the oil industry, remarkable for what was accomplished and remarkable for what failed of accomplishment.

The producers of crude held production to the lowest total in six years. Refiners as a whole controlled their operations conservatively, avoiding an addition to gasoline stocks and in the case of some other products effected material reductions in storage with corresponding improvement in the market for those other products.

But with crude oil the new year opens with a wrecked market structure, almost a parallel to Cushing. And gasoline prices are showing the effect of the collapse of crude prices.

The average oil man is not concerned so much about the future of the business—say five or ten years hence—as he is about the next 12 months, but it would be foolish to deny that attempting a prediction for 1933 would be exceptionally hazardous.

Although official estimates of crude production are 200,000 bbls. a day under those of a year ago, the leakage of illegally produced oil has been sufficient to offset any advantage the producer might have gained from that sacrifice.

It has been sufficient when made into gasoline sold correspondingly under the market to make it impracticable for refiners paying posted prices for their raw material to continue to pay such prices and meet such competition.

We have a breaking down of proration and the curtailment of crude oil production due to the inability of state agencies to enforce their own regulations. If this condition is not remedied quickly proration as an aid to profitable markets will become a dead letter.

As has been pointed out in these columns for the past two years and more the success of the proration plan of production, from the industry's standpoint, depends entirely upon the full and equitable enforcement of all orders which, if carried out, would mean that buyers and users would be placed on a parity with regard to the cost of their raw material.

Failure to enforce the rules means bootlegging of underpriced oil which in turn means underpriced refined products, leading inevitably to such a cycle of development as we have seen demonstrated in the past 60 days.

Yet, the total demand for petroleum has been in excess of 90 per cent of the preceding year, a record of sustained output which has been approached only in some lines of food and clothing staples, commonly called necessities of life.

Gasoline demand, based on shipment for the 11 months, showed a decrease of 8.8 per cent. Exports showed a decline of 20.3 per cent. Domestic demand decreased 8.4 per cent.

Refiners were able to curtail their production 9.2 per cent in the same period and consequently did not accumulate additional surplus at the close of the year. Total gasoline stocks were slightly less than a year ago.

Kerosene demand, based on shipments for the 11 months, actually showed an increase of 1 per cent. Exports were off 14.6 per cent but this was more than offset by an increase of 8 per cent in domestic demand. Presumably the economy possible by the use of kerosene for light and fuel in a period of depression helped the domestic consumption. Stocks decreased 16.8 per cent November 30 from November 1931.

Due to this favorable statistical position kerosene prices, particularly during the latter half of the year, were in a more favorable position than most of the other refined products.

Reflecting general industrial conditions the demand for lubricants showed a decrease of 16.3 per cent in domestic demand and 15 per cent in exports. Fortunately the refiners curtailed their production and stocks were 12.5 per cent less than a year ago.

In gas oils and distillates shipments decreased 11 per cent. The curtailment by refiners to keep gasoline supply in line with demand caused very material reduction—18 per cent—in the production of gas oil and distillates, and supply was not equal to the demand, with a reduction of 18 per cent in stocks.

As in the case of kerosene this favorable statistical position resulted in a favorable price situation during the latter half of the year. It may be noted that some grades of furnace oil, due to the increasing use of oil in heating homes, office buildings, hotels, apartment houses and other large buildings, showed an increased consumption during 1932.

In residual oils, for which comparable figures are available only east of California, there was a decline of 9.9 per cent in demand but of 13.6 per cent in production and of 12.5 per cent in stocks. This condition brought firmer markets particularly at interior points for the latter half of the year.

Among the minor products, road oil actually showed an increase in consumption with the probability of an enlarged market during 1933. Petroleum wax had a dull year in some of the fields in which it is largely used and consumption dropped 13 per cent.

Natural gasoline with a decrease of 18 per cent in production had a reduction of 25 per cent in inventories. Total demand was 9 per cent less than in the previous year.

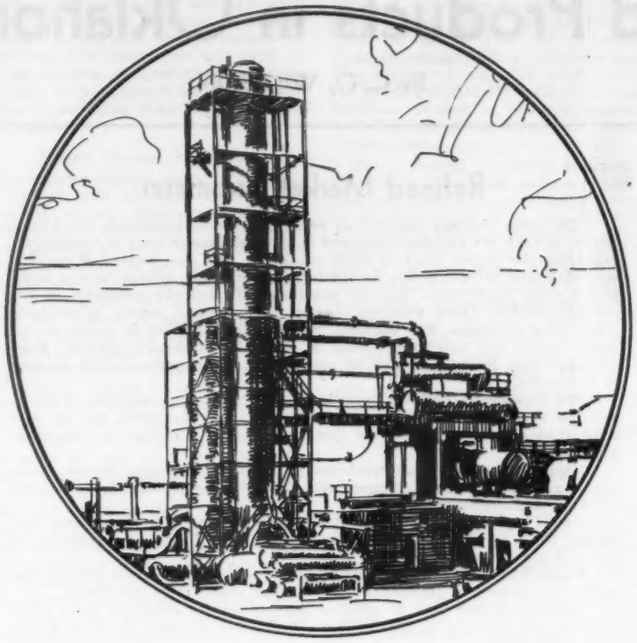
The significance of these figures is apparent in a year when demand for practically all manufactured products showed an almost perpendicular drop from what was considered normal.

The manner in which the demand for petroleum products has been maintained during the depression convincingly proves that they have become a necessity of American living. Once considered a luxury these products are being used by millions of consumers who have reduced their other purchases 25 to 100 per cent, but believe the car is indispensable.

This is the answer to the man who, in view of recent price developments may be inclined to discouragement in regard to the future of the petroleum industry.

The oil business, through mistakes, partly its own and partly of those over whom it has no control, has had its special difficulties added to those caused by the depression affecting all business, but it has been able to retain over 85 per cent of its peak market with assurance that at the first turn in general conditions its market will continue to expand.

From that viewpoint it is probably the soundest industry of any in the industrial world today.



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# New Crude Postings Followed by Lower Prices for Refined Products in Oklahoma Market

By C. O. WILLSON

The reaction of the Oklahoma (Group 3) refinery market the first of the week to the general reduction in posted crude oil prices which became effective throughout the Mid-Continent last week was additional price concessions in several products. Refinery gasolines and natural gasoline which gave some evidence of strength were again sluggish on Monday and Tuesday and several sellers lowered their quotations slightly in order to secure immediate shipping instructions.

Kerosene and distillate prices were lower, several important sales of furnace oils being closed at prices from one-fourth to three-eighths cent under the quotations of a week ago. Somewhat the same situation applied to high gravity fuels which are generally consumed as special fuels. No large quantities were being offered in any of the fuels but the attitude of the trade is that a combination of lower crude oil schedules and warm weather pointed to lower prices and some sellers particularly in Texas were willing to accept the lower offers of buyers. All grades of lubricants from a low viscosity neutral to the best grades of bright stocks were moving slowly but so far no important price revisions downward have been announced by any of the Mid-Continent manufacturers. The price of crude oil is a relatively unimportant factor in the cost of producing neutral oils and bright stocks and the attitude of the manufacturers is that prices in effect for several months had already discounted the lower crude oil schedules.

In regard to gasoline there have been several sizable inquiries in the Mid-Continent market from jobbers who appear to be interested in purchases not only to cover immediate requirements but also for storage. One inquiry for low octane U. S. Motor gasoline was reported for a total of 3,000,000 gallons. The buyer was reported to have offered 2 cents basis Group 3, the gasoline to be stored by the sellers and delivered over the next 90 days. So far as known none of this business was placed. It is known that jobber inventories are exceptionally low, practically no buying for storage purposes having taken place this winter. In previous years when winter prices were attractive, many of the larger jobbers were accustomed to fill their storage. With all of the U. S. Motor grades available over a price range of 2 to 3 cents per gallon, the refinery prices are now attractive from the storage angle unless the seller believes that present quotations will continue indefinitely.

The financial position of most jobbers, however, is serving to postpone these storage programs. In most states when gasoline is delivered to the bulk station of jobbers, the state tax becomes due the following month. This year there is additional 1 cent Federal tax which, although paid by the refiner, is added to the jobber price. Adding the taxes and the freight to the refinery price and a storage program at this time represents a substantial outlay. Credits, whether coming from local bankers or refiners are much tighter than they have been in previous years and this aid in financing is also conspicuous by its absence. To get away from the immediate payment of freight and taxes, jobbers have approached refiners with propositions in which gasoline would be stored at refineries and delivered as needed, the jobber paying for all the gasoline immediately. These propositions have not been received with favor by refiners who feel that prices are too low to justify any speculative transactions in which they are compelled to furnish the storage facilities.

### Change in Conditions

With markets marking time many of the buying and selling trade are closely watching developments in the crude oil situation and many are of the opinion that the Mid-Continent will shortly witness a change in fundamental operating conditions which will be reflected in refinery and consumer prices throughout 1933. Over the past two years the entire oil business has been operated on a basis of state control of crude oil production in several of the principal producing states including Oklahoma, California and Texas which produce approximately 85 per cent of the domestic supply. Operations have been based on the proposition that if current crude oil production could be kept within the current requirements through state control, that satisfactory prices could be maintained

## Refined Market Barometer

The price changes reported at refining centers throughout the United States in tank car gasoline continued downward. Due in part to uncertainty regarding the future trend in crude oil prices, new spot buying of gasoline was slow and several sellers at scattered points were willing to give additional price concessions. Natural gasolines reflected the weakness in the refinery grades. There were no changes of a general nature in products other than gasolines. The kerosene and distillate market is easier at interior points but continues strong at coastal distributing centers. More offerings were reported in fuel oil and gas oil. No important price changes in lubricants.

**Mid-Continent**—Refinery gasoline tank car prices steadier. Natural gasoline demand slow. Lower prices for distillate, kerosene, gas oil and some grades of fuels. High cold test fuels soft. No change in lubricants and wax.

**East Coast**—Continued weakness in gasoline. Kerosene steady. Continued good movement of furnace oil. Fuel oil market soft. Less demand for wax. Lubricants weak.

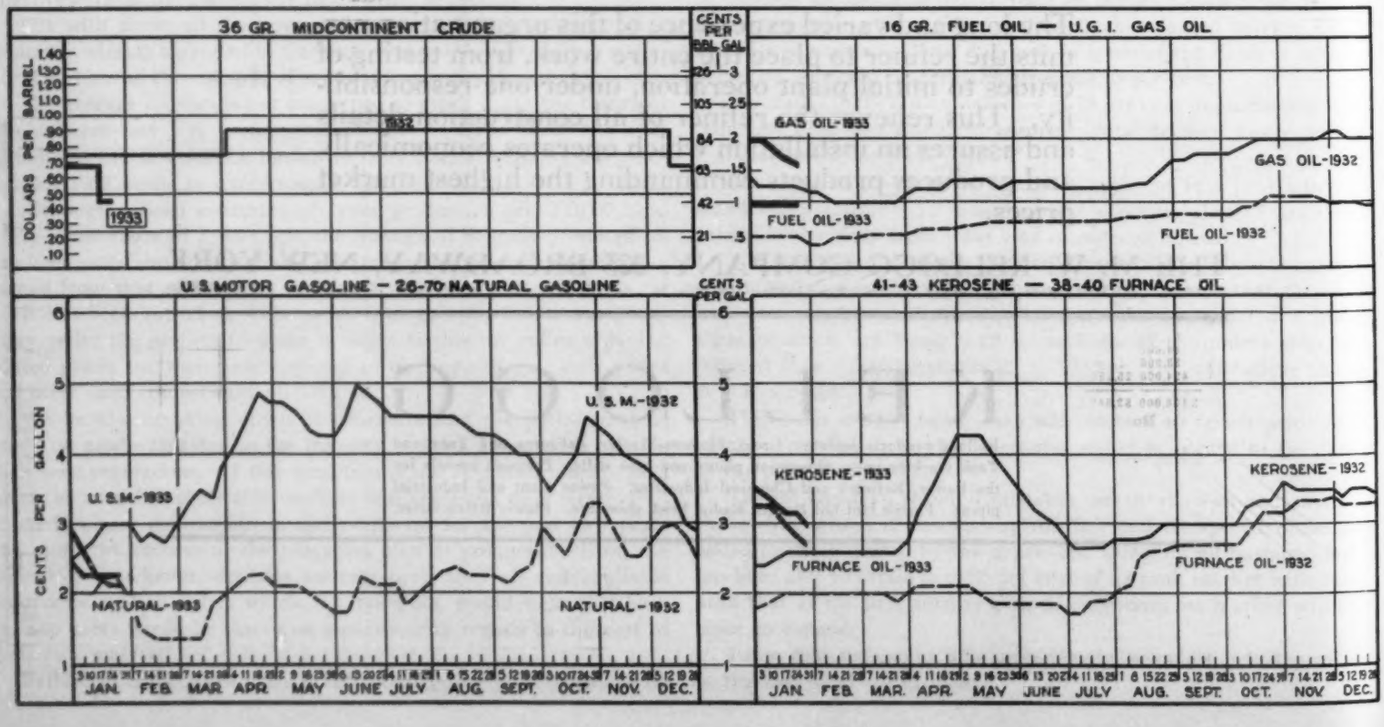
**Gulf Coast**—Gasoline unsettled and prices lower. Kerosene scarce and strong. Fuel oil and gas oil unchanged in price. Little new business in pale and red neutrals.

**Pennsylvania**—Gasoline prices lower. Kerosene more freely offered. No general reductions in lubricants despite lower crude price schedules.

**Chicago**—Better tone to gasoline market despite crude oil price cuts. Furnace oils and most grades of fuel oil and gas oil lower in price. Kerosene prices lower.

**California**—Gasoline prices lower for domestic movement. Reduce Diesel and gas oil prices.

## Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



for crude oil and these prices in turn could be reflected in refinery and consumer markets. Just how this plan has worked out, culminating in the crude price slashes of the past 30 days, is too well known to need repetition here. While the proration plan may be defended from the producing end of the operations, it can be said that it was never satisfactory to a large number of refinery operators who were unable to justify the prices paid for crude oil on a basis of returns at their refineries or through their company owned marketing facilities.

Although the failure of state agencies to enforce proration orders is generally held responsible for the recent collapse in posted crude schedules, there are market students who have always contended that even if orders had been enforced 100 per cent, markets could not have been maintained which would have been generally satisfactory and profitable. Two outstanding petroleum economists pointed out over two years ago that large potential production in flush fields, constituted excess supplies which would have the same bearish influence on markets that excess storage aboveground had in previous years before the proration plan of operation was conceived. These students of petroleum markets while favoring proration as a conservation measure, stated that from the standpoint of the industry state controlled proration must be considered as an "emergency measure" which should be ended as soon as possible through the reduction of potential supplies. Unfortunately, however, since these conditions were pointed out, the trend has been to increase rather than decrease the potential production and with the failure of enforcement plans, the industry now faces one of the most serious oversupply conditions in its history.

### To Increase Inventories

Actions on the part of some companies since the first of the year and expressions of opinions from other sources has led to conclusion by many that the Mid-Continent industry is to return to the "old days" of "pre-proration" and market students are endeavoring to predict its probable reaction in refinery markets. Obviously, the first step in such a change if it materializes, will be to reduce the present large potential output in several flush fields by running the excess supplies to storage. It is pointed out that the industry is in a better condition to carry out such a policy than any time in many years. Since 1929, there has been a general policy of reducing inventories of crude oil and most of the refinery products. This policy has been in part due to the fact that many considered crude oil prices too high in relation to refinery prices and they preferred to draw on storage rather than increase current purchases. Part of the reduction reflects financial conditions, several large and small companies finding it necessary to liquidate inventories to secure needed cash. Finally there were those who have never had any faith in the permanency of proration operations and they have prepared for storage programs by emptying their tanks as much as possible.

### Empty Storage Facilities

Government reports indicate that since the fall of 1929, the high point in Mid-Continent storage, that crude oil inventories at tank farms and refineries have been reduced at least 70,000,000 bbls. This figure does not take into consideration the new storage tanks that have been built in new fields and filled with storage while old storage in settled fields was emptied. Taking this new storage into consideration, some estimate that there is now 100,000,000 bbls. of empty field and refinery storage available in the Mid-Continent and Gulf Coast areas. Some of this storage is old and not desirable for the storage of high gravity crude oils, but could be used at least temporarily. Some of this old storage has been made gas tight in recent months with new roofs and other repairs.

It is believed that either at present crude oil prices or at slightly lower levels both large and small crude oil buyers will increase their purchases running to this storage any excess supplies. While in recent years most crude oil storage programs have meant losses to the owners, present prices are sufficiently low to minimize the danger of large losses over the next few years and it is believed that a number of buyers are willing to fill their depleted storage. This is particularly true of buyers in Oklahoma, Kansas and Arkansas, where no large flush production is available and where it is felt that a real scarcity will develop before the end of the year unless new fields are discovered.

From the refined market angle a development such as outlined above would probably result in higher rather than lower prices over the next several months. In the days before proration became the dominant factor in markets, the reduction in crude oil prices to the point where storage programs got under way, invariably marked the end of the decline in gasoline tank car markets. Excess supplies of crude oil sold under the general market were no longer available and the distress conditions responsible for declining markets ended and prices pointed upward.

In the present market it would mean that gasoline prices would be pegged at their present levels with a strong possibility of strengthening prices with the start of the spring months. The low crude oil prices will tend to increase plant operations with a return to profitable operations and this might weaken the present market for some of the heavy fractions secured in refinery operations with the end of the season of maximum consumption.

The foregoing obviously is based on changes in operating policies which at this time there is no certainty will actually develop. Contrary to the belief that proration is to be gradually dropped, unconfirmed reports are to the effect that one or more of state governors in the Mid-Continent are shortly to announce curtailment plans more drastic than any of those that have been tried over the past two years. The object of the plan, it is said, is to force buyers to advance crude oil prices to their levels of last fall and thus continue a policy of running the oil business through control of crude oil production by governmental agencies.

### Gasoline and Naphtha

The Mid-Continent gasoline market was aided last week when a large marketing organization bought in excess of 1,000,000 gallons of low and middle octane gasoline from East Texas refiners for shipment to the Gulf Coast where it was scheduled to be moved by boat to the East Coast. At the low prices now prevailing for crude oil, the advantage of East Texas refiners who have been buying their crude oil supplies under the posted prices, is not so great and it is believed that they will be less a factor in the northern markets. They have a favorable freight rate in shipments south to the coast and at present prices their competitive situation is better in shipments south than north.

Several of the Texas refiners advanced their prices on the low octane U. S. Motor gasoline to 2⅛ cents last week basis Group 3 but on Monday and Tuesday 2-cent material was again offered. The low of the Oklahoma market continues to be 2¼ cents in sales to the trade with little spot trading at that price. Prices on other grades are unchanged.

### Natural Gasoline

Natural gasolines, the first of the week, were not as strong as they were a week ago. The demand for 26-70 which was strong a week ago at 2⅛ cents slowed up and small sales were reported in Oklahoma at 2 cents. Similar reductions were made in the 22 and 20-pound material. There was little demand for the grades ranging from 18 to 11 pounds with the price differential one-fourth cent between the highest and lowest vapor pressure material.

### Kerosene and Distillate

The Oklahoma kerosene price on the 41-43 water white grade in sales to the trade dropped to a low of 3 cents with resale material selling as low as 2¾ cents in few sales. Several refiners continue their regular business at 3¼ and 3⅜ cents.

There is a wide range in prices for furnace oil distillates. The demand is not active and a few sellers having material to offer have taken prices as low as 2½ cents basis Group 3. One large order of East Texas prime white distillate was sold on a basis of 2¼ cents Group 3. In Oklahoma, the prices to the trade on all grades from 32-36 zero, straw range from 2⅝ to 3 cents with little premium for the high gravity grades.

### Fuel Oils and Gas Oils

The new prices for low gravity crudes are rapidly becoming a factor in the fuel oil market. With crude oil under 30 gravity selling from 20 to 30 cents per barrel based on the new posted schedules a situation is developing which points to lower prices for all grades of fuel oil and gas oil. However, the production of these low gravity crude oils is largely coming from old settled fields and is purchased on contracts by refiners who have had connections to leases for several years. For that reason the only "free" oil of low gravity is that in storage.

These low crude prices are held responsible for a decline in the price for 28-30 zero fuel oil to a low of 80 cents with price reductions in some of the other grades. The low gravity grades of suitable viscosity continue to bring a low of 40 cents in the Oklahoma market. U.G.I. and cracking stocks, gas oils are weaker with sales at a low of 2½ cents during the week.

### Lubricants and Wax

Manufacturers of neutral oils and cylinder stocks state that while the demand is not active, the slowness is largely seasonal and nothing would be gained in reducing quotations. With the largest manufacturer of wax still out of the market the wax market in Oklahoma continues steady in price.

# American Petroleum Institute Weekly Refinery Statistics

**Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3)Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.**

**Week Ending January 21, 1933, Compared to Week Ago**

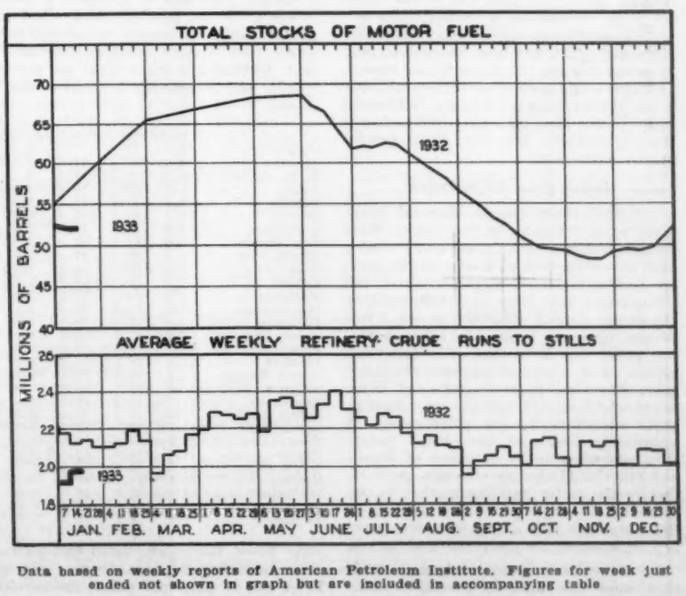
| | Week ending January 21 | | | | Week ending January 14, 1933 | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (1) | (2) | (3) | (4) |
| East Coast ..... | 99.1 | 442,000 | 13,205,000 | 7,676,000 | 99.1 | 396,000 | 12,821,000 | 7,722,000 |
| Appalachian ... | 95.0 | 83,000 | 1,785,000 | 846,000 | 95.0 | 83,000 | 1,703,000 | 848,000 |
| Ind., Ill., Ky ... | 97.5 | 307,000 | 7,067,000 | 3,373,000 | 97.5 | 287,000 | 7,037,000 | 3,282,000 |
| Okla., Kans., Mo. | 84.9 | 201,000 | 4,787,000 | 2,832,000 | 84.9 | 187,000 | 4,703,000 | 2,742,000 |
| Inland Texas ... | 56.4 | 99,000 | 1,500,000 | 2,191,000 | 56.4 | 95,000 | 1,431,000 | 2,185,000 |
| Tex. Gulf ..... | 97.7 | 392,000 | 6,103,000 | 6,443,000 | 97.7 | 363,000 | 6,451,000 | 6,622,000 |
| La. Gulf ..... | 97.3 | 81,000 | 1,424,000 | 2,368,000 | 97.3 | 94,000 | 1,289,000 | 2,499,000 |
| N. La. and Ark. | 88.5 | 44,000 | 298,000 | 492,000 | 88.5 | 48,000 | 336,000 | 467,000 |
| Rocky Mtn. .... | 90.8 | 33,000 | 1,190,000 | 484,000 | 90.8 | 24,000 | 1,117,000 | 451,000 |
| California ..... | 94.6 | 424,000 | 15,188,000 | 99,270,000 | 94.6 | 407,000 | 15,376,000 | 99,654,000 |
| Total U. S. ... | 91.6 | 2,106,000 | 52,547,000 | 126,025,000 | 91.6 | 1,984,000 | 52,264,000 | 126,472,000 |

Total motor fuel stocks Bureau of Mines basis 53,650,000 bbls.

**Week Ending January 21, 1933, Compared to Year Ago**

| | Week ending January 21 | | | | Week ending January 26, 1932 | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (1) | (2) | (3)* | (4) |
| East Coast ..... | 99.1 | 442,000 | 13,205,000 | 7,676,000 | 100.0 | 410,400 | 4,891,000 | 7,746,000 |
| Appalachian ... | 95.0 | 83,000 | 1,785,000 | 846,000 | 91.8 | 84,900 | 1,463,000 | 1,395,000 |
| Ind., Ill., Ky. .. | 97.5 | 307,000 | 7,067,000 | 3,373,000 | 98.9 | 250,600 | 4,574,000 | 5,152,000 |
| Okla., Kans., Mo. | 84.9 | 201,000 | 4,787,000 | 2,832,000 | 89.6 | 252,400 | 3,351,000 | 2,826,000 |
| Inland Texas ... | 56.4 | 99,000 | 1,500,000 | 2,191,000 | .... | 45,700 | 1,860,000 | 2,802,000 |
| Tex. Gulf ..... | 97.7 | 392,000 | 6,103,000 | 6,443,000 | 91.8 | 401,400 | 6,637,000 | 7,987,000 |
| La. Gulf ..... | 97.3 | 81,000 | 1,424,000 | 2,368,000 | 100.0 | 111,600 | 1,132,000 | 3,300,000 |
| N. La. and Ark.. | 88.5 | 44,000 | 298,000 | 492,000 | .... | 121,600 | 127,000 | 866,000 |
| Rocky Mtn. .... | 90.8 | 33,000 | 1,190,000 | 484,000 | 99.4 | 41,100 | 1,746,000 | 726,000 |
| California ..... | 94.6 | 424,000 | 15,188,000 | 99,270,000 | 97.1 | 452,400 | 13,966,000 | 96,121,000 |
| Total U. S. ... | 91.6 | 2,106,000 | 52,547,000 | 126,025,000 | 95.2 | 2,142,100 | 39,733,000 | 129,921,000 |

*Refinery stocks only.




Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

# Improved Undertone Noted in Chicago Territory Over Gasoline Tank Car Market and Prices

By R. C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Jan. 23.—While feeling in Chicago district oil trade circles still lacks clear definition following the long anticipated cuts in the crude oil and the retail gasoline markets, developments in the gasoline tank car situation appear to be well on the constructive side, while easing in the distillate and residual fuel oil markets can be attributed to curtailed demand due to unusually mild weather throughout a large part of the territory. Certain crude oils have been offered to replace the lighter residuals, and current lower price schedules in the crude oil markets make these offerings more attractive. The gasoline tank car markets, however, especially in the higher octane and lower endpoint grades, have an improved undertone.

Several of the larger marketers are seeking to buy gasoline in considerable quantities and they report that it is much easier to pick up small lots of two and three cars at prices under the ruling markets, prices which were becoming representative in the trade last week, than it is to obtain large shipments at even fractionally higher prices. Natural gasoline, generally a dead issue in this district when gasoline prices strike their present level, is reported stronger. Another indication that the gasoline tank car markets are firming up is revealed in the statement of the refiner who got the Benzoline Motor Fuel Co. business for February. The price on which the 125 tank car order was taken, 2.32 cents, Group 3, is nearly a half-cent higher in relation to the ruling markets than the price for the January business. The refiner said that he was surprised when he found that he had been awarded the business and discovered subsequently that competition had been on an unexpectedly high level.

Sentiment is growing among Chicago district marketers that the recent crude oil price cuts will be a much greater factor in stabilizing the industry than any influence which has been brought to bear in many months. Apparently, so observers say, warnings are of little avail, but when the ax falls realization is brought home to the most obdurate crude oil producers, refiners and cut price service station operators.

### Retail Price Adjustments

Although there were two general downward price revisions in the Middle West territory this month in as many weeks, each involving cuts of 1 cent in the service station and tank wagon markets, the adjustments have been so distributed that the entire normal structure shows a full decline of about 1 cent. In other words, the effect has been that of a two-stage reduction of 1 cent throughout the territory. The first reduction affected those areas where certain refiners were making their advantage as cut price crude oil purchasers felt, and the second reduction, according to the statement of Standard Oil Co. (Indiana) officials, gave effect in the motor gasoline market to the reduction in crude oil prices posted by the company's subsidiary, effective January 18, to meet the competitive situation.

In the eastern states early last week cognizance was taken by the major companies of competitive discounts of 2 cents to commercial accounts, and as a result the larger companies have increased the discount on their commercial buyers contracts from 1 cent to 2 cents. In the Middle West states Standard Oil Co. (Indiana) and others are taking steps to meet similar competition. The Standard company announces that effective February 1 the commercial discount of 1 cent, on contract, will be made at the service station at the time of purchase. Formerly the discounts were made at the end of the month and entailed considerable bookkeeping expense.

### Fear Discount Abuses

In view of the fact that competitors of the companies writing the 1-cent commercial discount contracts are allowing discounts of 1 or 2 cents to practically any customer demanding the lower price, it has been expected that the discount on these commercial contracts would be increased to 2 cents. However, the lower service station postings generally throughout the territory will at least postpone, it is hoped, action similar to that taken by the oil companies in the East.

The practice of major oil companies of allowing the discount to commercial accounts at the pump, according to officials of various other oil companies operating in the territory, will spread the now more or less restricted areas where discounts are made to customers other than those in the commercial classification at the service station. Throughout the territory it has been apparent that service station markets have been revised to overcome wide marginal guarantees allowed by certain companies, and low tank car laid in costs at trackage stations. More recently the downward adjustments in service station prices have been hooked up with the crude oil markets. The following table shows the position of the service station markets at the principal points in the territory, as announced by Standard Oil Co. (Indiana), on December 16, when Stanolind reduced its crude oil postings 23 cents a barrel; on January 3, when the first general service station price revision was made this year, and on January 18, when Stanolind made a further reduction of 25 cents a barrel in its crude oil postings, and when the parent company reduced the normal tank wagon and service station structure 1 cent. Federal and state taxes are not included, and the Group 3 freight rate is shown:

| | Dec. 16 | Jan. 3 | Jan. 18 | Freight |
|---|---|---|---|---|
| Chicago | 11.1 | 10.1 | 10.1 | 2.442 |
| Decatur | 12.6 | 12.6 | 11.6 | 2.442 |
| E. St. Louis | 10.9 | 9.9 | 9.9 | 2.05 |
| Joliet | 11.6 | 10.6 | 10.6 | 2.442 |
| Peoria | 11.6 | 11.6 | 11.6 | 2.41 |
| Quincy | 12.4 | 12.4 | 11.4 | 2.21 |
| Davenport | 12.0 | 12.0 | 11.7 | 2.41 |
| Des Moines | 12.9 | 11.9 | 11.9 | 2.24 |
| Mason City | 12.7 | 12.7 | 11.7 | 2.57 |
| Sioux City | 12.3 | 12.3 | 11.3 | 2.44 |
| Duluth | 14.7 | 13.7 | 12.7 | 3.17 |
| Mankato | 14.3 | 13.3 | 12.3 | 2.84 |
| Minneapolis | 11.4 | 10.4 | 10.4 | 2.84 |
| LaCrosse | 14.4 | 13.4 | 12.4 | 2.84 |
| Green Bay | 13.8 | 12.8 | 11.8 | 3.10 |
| Milwaukee | 12.3 | 11.3 | 11.3 | 2.67 |
| Madison | 13.5 | 12.5 | 11.5 | 2.84 |
| Grand Rapids | 13.5 | 12.5 | 11.5 | 2.70 |
| Saginaw | 13.6 | 12.6 | 12.6 | 3.96 |
| Evansville | 11.3 | 11.2 | 11.2 | 2.77 |
| Indianapolis | 13.4 | 12.4 | 11.4 | 2.90 |
| South Bend | 12.7 | 12.7 | 11.7 | 3.17 |
| Fargo | 16.1 | 15.1 | 14.1 | 4.16 |
| Huron | 14.5 | 13.5 | 12.5 | 3.23 |
| Sioux Falls | 14.0 | 13.0 | 13.0 | 2.71 |
| Kansas City | 11.1 | 10.1 | 10.1 | 1.75 |
| Springfield | 13.0 | 12.0 | 12.0 | 1.65 |
| St. Louis | 7.9 | 6.9 | 6.9 | 2.05 |
| St. Joseph | 9.0 | 5.9 | 5.9 | 1.75 |

At 17 of the points listed the decline since December 16, was 1 cent, and at 14 of the 31 principal points the service station prices were listed as normal on January 18, and reduced an additional cent for a total of 2 cents since December 16. It is estimated that less than 25 per cent of the entire territory was rated normal in the second reduction. It is contended in certain quarters that in as much as retail marketing by major and semimajor oil companies has indicated little regard for profits where gallonage is threatened, resulting in widespread wars, the additional margin afforded by the lower crude oil schedules has already been absorbed, so that there is little likelihood of further reductions in the service station and tank wagon markets. The part of the service station price represented by Federal and state taxes, freight and quantity discount allowance at a few points may be noted as follows: 9.94 cents out of 14.1 service station price, Chicago; 8.25 cents out of 9.9 cents, St. Joseph; 8.55 cents out of 12 cents, St. Louis; 10.21 cents out of 18 cents, Sioux Falls; 10.66 cents out of 18.1 cents, Fargo, and 10.73 cents out of 17.5 cents, Huron. The nets represent actual tank wagon delivered prices.

### Gasoline Tank Car Markets

If there is any particular trend in the gasoline tank car markets at this time the evidence points to a firmer structure. The quantity of "distress" gasoline finding its way into these markets has diminished to a point which bids well for the future and while an occasional quotation of 2⅛ cents for resale is heard, these sources are likewise accountable for the few offerings made at this price to the trade, and the conviction is gaining ground that the smaller refiners are moving toward a more conservative policy of plant operation.

Throughout a large part of the territory the weather has been mild enough to encourage motoring. In Chicago district, particularly, traffic has been heavy and service stations are reporting a brisker business. It is hoped that the state authorities will set up the date when registration of motor vehicles is required, now February 1, as it is feared that the heavy state and city duties will cause many motorists to abandon their automobiles for a few months, especially those who have purchased second-hand cars which have fallen within their restricted means. It is pointed out that the continued use of these automobiles is of advantage to the state and city, and so says the Kansas Oil Men's Association, the following tribute may be collected: Federal gasoline tax, Federal tax on new vehicles, Federal tax on tires, Federal tax on inner tubes, Federal lubricating oil tax, Federal tax on parts and accessories, state registration tax, state gasoline tax, state personal property tax, state drivers' license fees, state certificate of title fees, county gasoline taxes, county personal property tax, city personal property tax, city wheel tax, city drivers' license fees, and city registration fees.

### Better Grades Advance

While the low octane U. S. Motor gasoline Monday had not responded pricewise to the better feeling in the trade in regard to motor fuels, advances are expected any day now in the wake of a more actively constructive mode of refinery administration. According to every indication, and the opinions of close market observers, all of the markets in the crude and refined petroleum products can not reach a lower level without inviting chaos in the industry.

Monday's gasoline tank car prices reveal better demand for the higher octane and the low endpoint materials, now that the prices have taken a firm position well above the ruling markets for the low octane U. S. Motor, so that while the poor antiknock material continues to wait for absorption in an indifferent market and the better materials are experiencing a larger demand, it is contended by a large number of marketers that the lowering of the regular grade gasolines has won back a large number of motorists who balked at the wide service station differential between the regular grade and the low octane grade at the service station.

In Chicago district the service station operators of major, semimajor and independent gasoline service stations were checked on January 21, and it was found that every station reported that recent price cuts in the 57-64 octane regular gasoline had brought back a large number of customers who preferred the "antiknock" (more power) gasoline. This may account for the larger demand for higher octane gasolines and those low endpoint gasolines which give better performance in automobiles. Consulting the gasoline tank car markets on Monday the following significant postings are noted: U. S. Motor, 2¼ to 2½ cents; regular, 2½ to 2¾ cents; premium, 2⅞ to 3¼ cents; 60-62 400 endpoint, 2½ to 2¾ cents; 64-66 375 endpoint, 3¼ to 3½ cents; 68-70 300 endpoint gasoline, 3⅜ to 3⅝ cents, and aviation grade, no octane specifications, 3⅞ to 4⅛ cents.

### Naphtha Tank Car Markets

The special naphtha tank car markets remain unchanged. There appears to be little possibility of adverse developments in these markets.

### Kerosene Tank Car Markets

The kerosene tank car markets were easier this week, the 41-43 water white material being offered at 3 to 3⅛ cents, and the 42-44 water white kerosene listed at 3⅛ to 3¼ cents. Prime white distillate, 38-40, kept pace with the straw material at 2⅞ to 3⅛ cents.

### Distillates and Residuals

Mild weather in most of the territory is responsible for the softening seen in the distillate and residual fuel oil markets this week. The distillates show recessions of an eighth of a cent a gallon, while the fuels show losses of 5 to 10 cents a barrel. Prices Monday were fractionally lower as follows: 32-36 industrial gas oil, 1⅞ to 2⅛ cents; 32-36 straw distillate, 2¾ to 2⅞ cents; 38-40 straw distillate, 2⅞ to 3 cents; 38-40 prime white distillate, 2⅞ to 3⅛ cents; 28-30 zero fuel oil, down at $1 to $1.05; 26-28 zero fuel oil, likewise down 5 cents a barrel to 90 cents to $1; 24-26 zero fuel oil, down 5 cents a barrel to 70 to 75 cents; 22-26 zero fuel oil, 60 to 65 cents; 18-22 zero fuel oil, 50 to 55 cents, and below 18 zero to 15° fuel oil, 45 cents to 50 cents.

### Petroleum Coke

Marketers of petroleum coke in Chicago district report increased sales in 1933 over 1932. The increases are attributed to more intensive sales efforts. It is reported that one company launched an advertising campaign in the petroleum coke field and increased its sales during January, when the campaign started, by 50 per cent over the same period last year. Prices are unchanged in spite of cuts in the coal markets.

# Commercial Discounts Increased on East Coast With Gasoline Position Continuing Weak

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Jan. 23.—Reflecting continued weakness in the position of motor fuel markets and the intensified competition for retail business, leading operators in East Coast markets last week extended their concessions for commercial business. Standard Oil Co. of New York, effective January 19, announced that until further notice it would allow a discount of 2 cents per gallon from posted prices to all motor vehicles bearing commercial plates. This action was in line with the step taken earlier by a number of companies, including Standard Oil Co. of New Jersey, Atlantic Refining Co., Colonial Beacon, Gulf, and others, in increasing their discount allowance to commercial customers. In New York and New England territory the tank wagon discount has been increased one-half cent per gallon.

With further cuts in Mid-Continent crude prices during the week, and with eastern crude prices sagging, the market undertone on refined products in this area naturally showed considerable weakness, and gasoline in particular was showing indications of going lower. Lacking stabilization of crude production and prices, the outlook for eastern refined products markets is naturally extremely uncertain, and this has been reflected by a sharp drop in inquiries for forward deliveries of various products. East Coast refiners have further curtailed their plant operations in an effort to cut further into surplus stocks of products, and until the crude oil market shows some signs of settlement, it is expected that every effort will be made to hold down inventories.

Current crude quotations are extremely low, and it is expected that at the first definite signs of price improvement, refiners will fill all available storage in anticipation of more favorable markets during the summer months.

A determined effort is being made by petroleum and automotive interests in some of the eastern states to have their motor vehicle tax laws amended so that 1932 registration plates will be recognized until June 30.

### Refinery Gasoline

Posted prices at principal East Coast ports were held unchanged last week at 5½ cents per gallon for U. S. Motor gasoline, and 5¾ cents per gallon for 65 octane number and above, both in tank car lots, f.o.b. terminals.

The market undertone had softened considerably, however, in sympathy with the further cuts in crude, and business in the spot market was reported going through in some instances at half to 1 cent a gallon under these posted levels. The aggregate gallonage involved in these cut price transactions is not yet sufficiently large to force the general market to the lower levels, but unless an immediate change for the better develops in the statistical position of the market, it is expected that the major refiners will be forced to again lower their posted quotations.

### Tank Wagon Gasoline

The action of leading marketers in increasing commercial discounts to 2 cents per gallon was tantamount to a reduction of 1 cent per gallon in service station prices to at least a part of their clientele, and this action reflected the weaker refinery position and the increasing retail competition for commercial business. Some shading was in progress in certain parts of the territory, and another general reduction in open posted prices is looked for.

In New York and New England territory, tank wagon discounts were increased to 2½ cents per gallon on 20,000 to 100,000 gallons per month, 3 cents for 100,000 to 300,000 gallons and 3½ cents for 300,000 gallons per month and up, increase of one-half cent per gallon in each instance. In Standard of New Jersey territory, tank wagon discounts to commercial accounts remained unchanged at 2½ cents per gallon for 20,000 to 100,000 gallons monthly, 3 cents on 100,000 to 300,000 gallons, and 3½ cents on 300,000 gallons and up per month.

### Kerosene

Notwithstanding the further cuts in crude oil prices during the past week, kerosene continued in steady position at East Coast refineries. Sellers were posting 41-43 water white at 5½ to 6 cents per gallon in tank car lots at terminals, with the inside quotation prevailing in most instances. Considerable quantities of kerosene are being used in the blending of furnace oils, and it is reported that the current production of refineries in this area is moving readily into consuming channels, with shipments from California and the Gulf Coast likewise finding a ready outlet in this territory. Kerosene is now bringing refiners a larger netback than is the case on sales of U. S. Motor gasoline.

Tank wagon kerosene markets continue to reflect the strength shown in the refinery posiiton, and quotations were well maintained throughout the area last week. Kerosene heaters are apparently being more widely used in the East this winter than for many years back, and in addition an important new market has been created by the widespread use of kerosene range burners. The latter market gives every promise of further substantial expansion.

### Furnace Oils

Continued activity is reported in the market for distillates, and the refinery market again went through the week with prices well maintained, despite the renewed weakness in crude oil prices. For tank car shipment, refiners in the New York Harbor area continue to quote 36-40 gravity oil at 5 cents per gallon, 32-36 at 4 cents per gallon, and 21 gravity industrial fuel oil at 3½ cents per gallon, all prices f.o.b. terminals.

Easiness in the tank wagon market for furnace oils in some sections is still apparent, but this condition is directly traceable to intensified competition for retail accounts, rather than any inherent weakness in the market itself. At an average price of 6½ cents per gallon for 32-36 furnace oil, tank wagon delivery, there is a wide profit margin for the distributor, especially in the case of the larger distributors who obtain their supplies in cargo lots, generally under the posted tank car prices, and this has given these leading factors considerable leeway in meeting price competition.

### Fuel Oil

Further reductions in crude petroleum posted prices in the Southwest have tended to bring about an easier feeling in the fuel oil market in East Coast refining centers, but leading refiners have not yet made any downward revisions in their posted prices, and are still holding the market at 75 cents per barrel, bulk at terminals.

Lloyd's report on new shipbuilding during the closing quarter of 1932 discloses a drop of 15 per cent in new construction undertaken during the period, with new building at the lowest level in the past 50 years.

### Diesel Oil

Spot volume was holding up fairly well during the week, but the market undertone was naturally affected by the further reductions in crude oil posted prices, and some interests are inclined to anticipate an early downward scaling in posted prices for Diesel oil. The market at principal East Coast ports continues at $1.65 per barrel, in bulk, at refineries or tidewater terminals.

For domestic delivery, refiners are still quoting 26-30 gravity Diesel oil at 4 cents per gallon, tank car shipment, with a moderately active market reported.

### Gas Oil

Conditions in this division of the market showed relatively little change during the week. Refiners are drawing against stocks on current business, total holdings of gas and fuel oils at East Coast refineries on January 14 totaling 7,722,000 bbls., as compared with 7,936,000 bbls. at the close of the previous week.

The local market for 28 gravity minimum gas oil is still posted at 4 cents per gallon, but most of the current business is going through at 3½ to 3¾ cents, tank cars, f.o.b. terminals, and the market position is weaker, reflecting lower crude oil quotations.

### Paraffin Wax

Easiness continued in evidence on fully refined grades last week, and while no further price cuts materialized, sellers were shading spot prices fractionally on spot business. Competition has become so sharp in this market in recent months that 5 and 10 points now often decide a sale, in contrast with the former general practice of quoting prices in fractions of one-eighth cent per pound minimum.

Domestic consumers have not come into the market for prompt and nearby supplies in the volume which sellers had an-

(Continued on Page 31)

# Exports and Imports of Refined Products; Receipts of California Oils in the East

NEW YORK, Jan. 23.—The Gulf export market for gasoline has weakened, and while suppliers have not revised their previous quotations of 3⅝ cents per gallon for U. S. Motor and 3⅞ to 4 cents per gallon for 64-66, the undertone is soft, and reductions are looked for. Two part cargoes for February shipment to France, were reported closed at 4¼ cents per gallon, c.i.f. French port, which figures out between 3¾ and 3⅞ cents per gallon f.o.b. Gulf.

Export crude oil buyers were still holding off the market, pending settlement of the production situation in East Texas.

### Petroleum Exports

The following table shows exports of principal refined petroleum products reported from the Port of New York during the three weeks ended January 14 (all figures in gallons unless otherwise noted):

| | Week ended | | |
|---|---|---|---|
| | Jan. 14 | Jan. 7 | Dec. 31 |
| Gasoline | 30,000 | 158,000 | ..... |
| Naphtha | ..... | ..... | 2,000 |
| Kerosene | 2,000 | 2,000 | 2,000 |
| Fuel and gas oil | ..... | 1,060,000 | 195,000 |
| Lub oil | 770,000 | 565,000 | 2,393,000 |
| Pet., refined | 335,000 | 168,000 | 12,000 |
| | Pounds | | |
| Petrolatum | 130,000 | ..... | 10,000 |
| Paraffin wax | 2,495,000 | 595,000 | 1,005,000 |
| Refined | ..... | 116,000 | 50,000 |
| Scale | 352,000 | 125,000 | 350,000 |
| Lub grease | 795,000 | 460,000 | 320,000 |

### Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended January 14 totaled 691,000 bbls., a daily average of 98,714 bbls., compared with 686,000 bbls., a daily average of 98,000 bbls., for the previous week, and a daily average of 117,536 bbls. for the four weeks ended January 14. Details follow:

(Barrels of 42 gallons)

| | Bbls. |
|---|---|
| At Gulf Coast ports— | |
| New Orleans | 17,000 |
| At Atlantic Coast ports— | |
| Baltimore | 67,000 |
| New York | 388,000 |
| Philadelphia | 219,000 |
| Total | 674,000 |
| At all United States ports— | |
| Total | 691,000 |
| Daily average | 98,714 |
| Daily average four weeks | 117,536 |

The week's imports consisted of 496,000 bbls. of crude petroleum and 195,000 bbls. of fuel oil.

### California Oil Receipts

Receipts of California crude and refined oil at Atlantic Coast ports during the week ended January 14 (there were no receipts at Gulf Coast ports during the week) totaled 488,000 bbls., a daily average of 69,714 bbls., compared with 108,000 bbls., a daily average of 15,429 bbls., during the previous week and a daily average of 42,179 bbls. for the four weeks ended January 14. Details follow:

(Barrels of 42 gallons)

| At Atlantic Coast ports— | Bbls. |
|---|---|
| Boston | 46,000 |
| New York | 126,000 |
| Philadelphia | 116,000 |
| Others | 200,000 |
| Total | 488,000 |
| Daily average | 69,714 |
| Daily average four weeks | 42,179 |

The week's receipts comprise 159,000 bbls. of gasoline, 78,000 bbls. of kerosene, 243,000 bbls. of fuel oil and 8,000 bbls. of lubricants.

At the close of the week, three cargoes of California refined products were reported afloat for the East Coast, all consigned to New York, as follows:

Forty-three thousand barrels of gasoline on the Associated Oil tanker Solana.

Seventy-two thousand eight hundred barrels of gasoline on The Texas Company tanker Illinois.

Eighty thousand barrels of gasoline on the Tide Water Oil Co. tanker Robert E. Hopkins.

# REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

**EXCLUSIVE OF TAXES**

**The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21, 1932.**

## Refinery Gasolines

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| *U. S. Motor grades: | | | | |
| Regular | .02⅝ | .02⅞ | .02⅝ | .02⅞ |
| Premium | .02⅞ | .03⅛ | .02⅞ | .03⅛ |
| Third grade | .02¼ | .02½ | .02¼ | .02½ |
| 60-62 400 grades: | | | | |
| Regular | .02¾ | .03 | .02¾ | .03 |
| Premium | .03 | .03¼ | .03 | .03¼ |
| Third grade | .02⅝ | .02⅞ | .02⅝ | .02¾ |
| 64-66 390 | .02⅝ | .02⅞ | .02⅝ | .03 |
| 64-66 375 | .02½ | .03 | .03 | .03¼ |
| 68-70 350 | .03⅛ | .03½ | .03⅛ | .03½ |
| NORTH TEXAS— | | | | |
| U. S. Motor grades: | | | | |
| Regular | .02½ | .02¾ | .02½ | .02⅞ |
| Premium | .02¾ | .03 | .02¾ | .03 |
| Third grade | .02½ | .02⅝ | .02½ | .02½ |
| 60-62 400 | .02½ | .02½ | .02¼ | .02½ |
| 64-66 390 | .02½ | .02¾ | .02½ | .02¾ |
| 64-66 375 | .02¾ | .03 | .02¾ | .03 |
| 64-66 360 | .03 | .03¼ | .03 | .03¼ |
| †NORTH LOUISIANA— | | | | |
| U. S. Motor grades: | | | | |
| Regular | .03⅝ | | .03⅝ | |
| Premium | .03⅞ | | .03⅞ | |
| Third grade | .03 | | .03 | |
| 60-62 400 | .03¼ | .03½ | .03¼ | .03¾ |
| †ARKANSAS— | | | | |
| U. S. Motor grades: | | | | |
| Regular | .03⅝ | | .03⅝ | |
| Premium | .03⅞ | | .03⅞ | |
| Third grade | .03 | | .03 | |
| CHICAGO (Based on Oklahoma Group 3)— | | | | |
| U. S. Motor grades: | | | | |
| Regular | .02½ | .02¾ | .02½ | .02¾ |
| Premium | .02⅞ | .03¼ | .02¾ | .03¼ |
| Third grade | .02¼ | .02½ | .02¼ | .02½ |
| 60-62 400 | .02½ | .02¾ | .02⅝ | .02⅞ |
| 64-66 375 | .03 | .03¼ | .03 | .03¼ |
| 68-70 360 | .03⅜ | .03⅝ | .03⅜ | .03⅝ |
| Aviation fighting grade | .03⅜ | .04⅛ | .03⅜ | .04⅛ |

***Octane Ratings**—The following octane ratings apply to the three grades of U. S. Motor gasoline: Regular, 57-65 octane numbers; premium, above 65 octane number; third grade, below 57 octane number.

†For Arkansas, Louisiana and Mississippi delivery.

| PENNSYLVANIA (inland refineries)— | | | | |
|---|---|---|---|---|
| U. S. Motor | .05½ | .05⅝ | .05¼ | .05½ |
| 60-62 400 | .05¼ | .05½ | .05½ | .05⅝ |
| 64-66 375 | .05⅝ | .06 | .06 | .06¼ |
| 68-70 350 | .06 | .06¼ | .06⅛ | .06¼ |
| CALIFORNIA (domestic movement only)— | | | | |
| 54-58 U. S. Motor | .05½ | .06¼ | .05⅝ | .06½ |
| 58-60 400 | .06 | .07 | .06½ | .07 |
| EAST COAST— | | | | |
| U. S. Motor, below 65 octane: | | | | |
| New York (Bayonne) | .05½ | | .05½ | |
| Boston | .05½ | | .05½ | |
| Baltimore, Md. | .05½ | | .05½ | |
| Charleston, S. C. | .05½ | | .05½ | |
| U. S. Motor, 65 octane and above: | | | | |
| New York (Bayonne) | .05¾ | .06 | .05¾ | .06 |
| Boston | .05¾ | | .05¾ | |
| Baltimore, Md. | .05¾ | | .05¾ | |
| Charleston, S. C. | .05¾ | | .05¾ | |
| GULF COAST (domestic)— | | | | |
| U. S. Motor, 65 octane and above | .04⅛ | .04½ | .04½ | .04⅝ |
| U. S. Motor, below 65 octane number | .03⅞ | .04 | .04 | |

## Naphthas

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| 50-52 450 (blending) | .02¼ | .02½ | .02¼ | .02½ |
| PENNSYLVANIA (inland refineries)— | | | | |
| 50-54 430-450 (blending) | .05 | .05¼ | .05 | .05¼ |
| ARKANSAS— | | | | |
| 48-50 450 (blending) | .02¾ | .03 | .02⅞ | .03 |
| CHICAGO (Based on Oklahoma Group 3)— | | | | |
| 50-52 (blending) | .02½ | | .02½ | |
| Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p. | .05¾ | .06 | .05¾ | .06 |
| Lacquer diluent, 180 i.b.p.-250 e.p. | .07 | .07¼ | .07 | .07¼ |
| Lacquer diluent, 140 i.b.p.-200 e.p. | .08½ | | .08½ | |
| Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p. | .05¾ | .06 | .05¾ | .06 |
| Stoddard solvent, 300 i.b.p.-410 e.p., over 100° flash | .05¼ | .05½ | .05¼ | .05½ |
| Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash | .04½ | .04¾ | .04½ | .04¾ |
| V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p. | .05½ | .05¾ | .05½ | .05¾ |
| Petroleum spirits | .04¼ | .04½ | .04¼ | .04½ |

## Natural Gasolines

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| Grade 18-55 | .02½ | .02⅝ | .02½ | .02⅝ |
| Grade 26-70 | .02⅛ | | .02⅛ | |
| Grade 30-70 | .02⅛ | | .02⅛ | |
| *Low vapor pressure grades: | | | | |
| 15 lb. v.p. (max.) | .02¾ | .02⅞ | .02¾ | .02⅞ |
| 11 lb. v.p. (max.) | .03 | .03¼ | .03 | .03¼ |
| NORTH TEXAS— | | | | |
| Grade 18-55 | .02½ | .02⅝ | .02½ | .02⅝ |
| Grade 26-70 | .02⅛ | | .02⅛ | |
| Grade 30-70 | .02⅛ | | .02⅛ | |
| *Low vapor pressure grades: | | | | |
| 15 lb. v.p. (max.) | .02¾ | | .02¾ | |
| 11 lb. v.p. (max.) | .03 | | .03 | |
| NORTH LOUISIANA— | | | | |
| Grade 26-70 | .02½ | | .02½ | |
| CALIFORNIA— | | | | |
| 75-78 375 | .04½ | .05¼ | .04¾ | .05¼ |

## Kerosenes

(All kerosenes water white)

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| 41-43 | .03 | .03⅜ | .03⅛ | .03½ |
| 42-44 | .03⅛ | .03½ | .03¼ | .03⅝ |
| NORTH TEXAS— | | | | |
| 40-41 | .02⅞ | .03 | .03 | |
| 41-43 | .03 | .03⅛ | .03 | .03¼ |
| †NORTH LOUISIANA— | | | | |
| 41-43 | .03¾ | | .03¾ | |
| 42-44 | .04 | | .04 | |
| †ARKANSAS— | | | | |
| 41-43 | .03¾ | | .03¾ | |
| PENNSYLVANIA (inland refineries)— | | | | |
| 45 | .04⅝ | .04¾ | .04¾ | .04⅞ |
| 46 | .04¾ | .04⅞ | .04⅞ | .05 |
| 47 | .04⅞ | .05 | .04⅞ | .05⅛ |
| CHICAGO (Based on Group 3)— | | | | |
| 41-43 | .03 | .03⅛ | .03⅛ | .03¼ |
| 42-44 | .03⅛ | .03¼ | .03¼ | .03⅜ |
| *CALIFORNIA— | | | | |
| 38-40 high burning test | .03¾ | .04½ | .04 | .04¾ |
| NEW YORK (Bayonne, N. J.)— | | | | |
| 41-43 | .05½ | .06 | .05½ | .06 |
| GULF COAST (domestic)— | | | | |
| 41-43 water white | .04½ | | .04½ | |

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

## Furnace Oils and Tractor Fuels

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| 32-36 straw | .02½ | .02⅝ | .02¼ | .03⅛ |
| 36-38 straw | .02⅝ | .02⅞ | .02⅞ | .03 |
| 38-40 straw | .02⅝ | .02⅞ | .02⅞ | .03 |
| 39-41 prime | .02⅝ | .03 | .02⅞ | .03 |
| NORTH TEXAS— | | | | |
| 38-40 straw | .02½ | .02¾ | .02¾ | .03 |
| †NORTH LOUISIANA— | | | | |
| 36-40 | .03¼ | .03½ | .03¾ | |
| †ARKANSAS— | | | | |
| 32-36 | .03¼ | .03½ | .03¼ | .03½ |
| CHICAGO (Based on Group 3)— | | | | |
| 32-36 straw | .02⅝ | .02¾ | .02⅞ | .03 |
| 38-40 straw | .02⅝ | .03 | .03 | .03¼ |
| 38-40 prime white | .02¾ | .03 | .02⅞ | .03⅛ |
| PENNSYLVANIA (inland refineries)— | | | | |
| 40-41 prime white | .03¾ | .04 | .03¾ | .04 |
| NEW YORK (Bayonne, N. J.)— | | | | |
| 32-36 | .04 | | .04 | |
| 36-40 | .05 | | .05 | |
| 21 (industrial) | .03½ | | .03½ | |

Above prices are for distillate oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

## Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| 32-36 (G.O.) cracking stock | .01⅝ | .01¾ | .01¾ | .02 |
| U.G.I. (G.O.) | .01⅝ | .01¾ | .01¾ | .02 |
| 32-36 zero to 15 (G.O.) high flash | .02¼ | .02½ | .02½ | .02¾ |
| 28-30, zero to 10 | .80 | .90 | .95 | 1.05 |
| 26-30, zero to 10 | .75 | .80 | .80 | .90 |
| 24-26 | .60 | .65 | .60 | .65 |
| 20-22 | .50 | .55 | .50 | .55 |
| Below 16 | .40 | .45 | .40 | .45 |
| NORTH TEXAS— | | | | |
| 32-36 (G.O.) industrial | .01⅝ | .01¾ | .01¾ | .02 |
| 22-26 | .45 | .50 | .45 | .50 |
| Below 20 | .40 | .45 | .40 | .45 |
| NORTH LOUISIANA— | | | | |
| 32-36 (G.O.) zero | .03 | | .03 | |
| 14-16 | .45 | | .45 | |
| †ARKANSAS— | | | | |
| 30-32 (G.O.) zero high flash | .03 | | .03 | |
| 14-16 | .45 | | .45 | |
| CHICAGO (Based on Group 3)— | | | | |
| 32-36 (G.O.) industrial | .01¾ | .01⅞ | .02 | .02¼ |
| 28-30 (zero) | .95 | 1.00 | 1.05 | 1.10 |
| 26-28 (zero) | .85 | .90 | .90 | .95 |
| 22-26 (zero) | .60 | .65 | .65 | .70 |
| 18-22 (zero) | .50 | .55 | .55 | .60 |
| Below 18 | .45 | .50 | .50 | .55 |
| PENNSYLVANIA (inland refineries)— | | | | |
| 36-40 | .03¼ | .03½ | .03¼ | .03½ |

Note: Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

| CALIFORNIA— | | | | |
|---|---|---|---|---|
| 30-34 (G.O.) per bbl. | .85 | .95 | .90 | 1.00 |
| 27 plus Diesel | .85 | .95 | .90 | 1.00 |
| 15-19 bunker (at tidewater) | .55 | .65 | .55 | .65 |
| 15-19 (cargo lots) | .50 | .60 | .50 | .60 |
| 15-19 (tank cars) | .35 | .55 | .35 | .50 |
| GULF COAST— | | | | |
| 28-30 (G.O.) | .03½ | | .03½ | |
| 28-30 Diesel | 1.50 | 1.55 | 1.50 | 1.65 |
| Bunker C (bulk cargoes) | .50 | | .50 | |
| Bunker C (bunkers) | .60 | | .60 | |
| NEW YORK (Bayonne, N. J.)— | | | | |
| 28 plus (G.O.) | .03¾ | .04 | .03¾ | .04 |
| *28-30 Diesel | 1.65 | | 1.65 | |
| 26-30 Diesel (tank cars) | .04 | | .04 | |
| †Bunker C | .75 | | .75 | |

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

## Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

| | | |
|---|---|---|
| Breeze (screenings) | 5.50 | 5.50 |
| Stills runs | 6.50 | 6.50 |
| Lump and egg | 7.50 | 7.50 |

*Refineries will absorb freight to 80 cents a ton.

## Neutral Oils

(Viscosity at 100° F. and color)

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| Zero to 10 Cold Test: | | | | |
| 150-3 | .06¼ | .06½ | .06¼ | .06½ |
| 180-3 | .07½ | .07⅝ | .07½ | .07⅝ |
| 180-4 | .07 | .07¼ | .07 | .07¼ |
| 200-3 | .08¼ | .08½ | .08¼ | .08½ |
| 200-4 | .08 | .08¼ | .08 | .08¼ |
| 240-3 | .09¾ | .10 | .09¾ | .10 |
| 240-4 | .09¼ | .09½ | .09¼ | .09½ |
| 280-3 | .11¼ | .11½ | .11¼ | .11½ |
| 280-4 | .10¼ | .10½ | .10¼ | .10½ |
| 500-3½ | .11¾ | .12 | .11¾ | .12 |
| 350-3½ | .12¼ | .12½ | .12¼ | .12½ |
| 400-4 | .12¾ | .13 | .12¾ | .13 |
| 500-4½ | .13 | .13½ | .13 | .13½ |
| 100-2 paraffin oil | .04¼ | .04½ | .04¼ | .04½ |
| 15-30 Cold Test: | | | | |
| 200-3 | .07½ | .07¾ | .07½ | .07¾ |
| 200-4 | .07¼ | .07½ | .07¼ | .07½ |
| 240-3 | .09¼ | .09½ | .09¼ | .09½ |
| 240-4 | .08¾ | .09 | .08¾ | .09 |
| 280-3 | .10¾ | .11 | .10¾ | .11 |
| 280-4 | .09¾ | .10 | .09¾ | .10 |
| PENNSYLVANIA— | | | | |
| 150 vis., No. 3, 400-405: | | | | |
| Zero pour test | .11¾ | .12 | .11¾ | .12 |
| 10 pour test | .11¼ | .11⅝ | .11¼ | .11⅝ |
| 15 pour test | .10 | .10½ | .10 | .10½ |
| 25 pour test | .09 | .09½ | .09 | .09½ |
| 180 vis., No. 3, 25 pour test | .12 | .12½ | .12 | .12½ |

| | | | | |
|---|---|---|---|---|
| 200 vis., No. 3: | | | | |
| Zero pour test | .18 | .19 | .18 | .19 |
| 10 pour test | .17 | .18 | .17 | .18 |
| 15 pour test | .16 | | .16 | |
| 25 pour test | .13½ | .14 | .13½ | .14 |
| 30 pour test | .13 | | .13 | |
| GULF COAST— | | | | |
| Pale Oils: | | | | |
| 100-2-2½ | .05¼ | .05½ | .05¼ | .05½ |
| 200-3 | .06½ | | .06½ | |
| 300-3 | .07¼ | .07½ | .07¼ | .07½ |
| 500-3½ | .09¼ | .09½ | .09¼ | .09½ |
| 750-3½ | .10¼ | .10½ | .10¼ | .10½ |
| 1,200-3½ | .12½ | | .12½ | |
| 2,000-4 | .13½ | .14 | .13½ | .14 |
| Red Oils: | | | | |
| 200-5-6 | .05¼ | .05½ | .05¼ | .05½ |
| 300-5-6 | .06½ | .06¾ | .06½ | .06¾ |
| 500-5-6 | .07½ | .07¾ | .07½ | .07¾ |
| 1,200-5-6 | .10½ | .11 | .10½ | .11 |
| 2,000-6 plus | .12¼ | .12½ | .12¼ | .12½ |
| CALIFORNIA— | | | | |
| Pale Oils: | | | | |
| 100-2½-3 | .09 | .10 | .09 | .10 |
| 200-2½-3 | .10 | .11 | .10 | .11 |
| 300-3-3½ | .11 | .11½ | .11 | .11½ |
| 350-3-4 | .11½ | .11¾ | .11½ | .11¾ |
| 400-3-4 | .11¾ | .12 | .11¾ | .12 |
| 450-3-4 | .12 | .12¼ | .12 | .12¼ |
| 550-3-4 | .12¼ | .12¾ | .12¼ | .12¾ |
| Red Oils: | | | | |
| 200-4-5 | .08¾ | .09¼ | .08¾ | .09¼ |
| 300-5-6 | .10 | .10½ | .10 | .10½ |
| 350-5-6 | .10½ | .11 | .10½ | .11 |
| 400-5-6 | .11 | .11½ | .11 | .11½ |
| 450-5-6 | .11½ | .11¾ | .11½ | .11¾ |
| 500-5-6 | .11¾ | .12 | .11¾ | .12 |
| 600-5-6½ | .12 | .12¼ | .12 | .12¼ |
| 700-6½ plus | .12¼ | .12½ | .12¼ | .12½ |
| 750-6½ plus | .12½ | .12¾ | .12½ | .12¾ |
| 900-6½ plus | .13 | .14½ | .13 | .14½ |

## Bright and Steam Refined Stocks

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| 63w light green | .07¾ | .08 | .07¾ | .08 |
| 600 light green S.R. | .05 | .06 | .05 | .06 |
| 600 dark green S.R. | .04 | .04½ | .04 | .04½ |
| Bright Stocks: | | | | |
| 190-200 D | .17½ | | .17½ | |
| 150-160 D, 0-10 | .15½ | | .15½ | |
| 150-160 D, 10-25 | .15 | | .15 | |
| 150-160 D, 25-40 | .14½ | | .14½ | |
| 150-160 E | .14½ | | .14½ | |
| PENNSYLVANIA— | | | | |
| 600 S.R. | .09½ | .10½ | .09½ | .10½ |
| 650 S.R. | .12 | .13 | .12 | .13 |
| 600 Pennsylvania flash | .13½ | .14 | .13½ | .14 |
| 630 D filtered | .18½ | .19 | .18½ | .19 |
| 600 E filtered | .13½ | .14½ | .13½ | .14½ |
| Pennsylvania Grade bright stock: | | | | |
| Bright Stock, No. 8 color, 145-50 vis. 210-540-550 flash: | | | | |
| 10 pour test | .21 | .22½ | .21 | .22½ |
| 15 pour test | .20 | .21 | .20 | .21 |
| 25 pour test | .18 | .19 | .18 | .19 |

## Wax and Petrolatum

(Prices per pound)

| OKLAHOMA (Group 3)— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| 124-126 white crude scale | .01⅞ | .02 | .01⅞ | .02 |
| PENNSYLVANIA— | | | | |
| 122-124 | .02⅛ | | .02⅛ | |
| 124-126 | .02⅛ | .02¼ | .02⅛ | .02¼ |
| NEW YORK (Bayonne, N. J.)— | | | | |
| 120-122 | .02⅜ | | .02⅜ | |
| 125-127 | .02⅝ | | .02⅝ | |
| 130-132 | .03⅛ | | .03⅛ | |
| 133-135 | .04 | | .04 | |
| 135-137 | .04¼ | | .04¼ | |
| Petrolatum in barrels in carload lots: | | | | |
| Dark green | .01¾ | | .01¾ | |
| Amber | .02⅛ | | .02⅛ | |
| Extra amber | .02½ | | .02½ | |
| Lily white | .05½ | | .05½ | |
| Snow white | .06½ | | .06½ | |

## Export Prices

GASOLINE

| GULF COAST— | Jan. 24 | | Jan. 17 | |
|---|---|---|---|---|
| U. S. Motor | .03⅝ | | .03⅝ | |
| 60-62 400 | .03⅞ | | .03⅞ | |
| 61-63 390 | .03⅞ | | .03⅞ | |
| 64-66 375 | .03⅞ | .04 | .03⅞ | .04 |
| LOS ANGELES, CALIF.— | | | | |
| U. S. Motor, 53-55, 437 e.p. | .03¾ | .04¼ | .03¾ | .04¼ |
| U. S. Motor, 65 octane num. | .04¾ | .05 | .04¾ | .05 |
| U. S. Motor, 67 octane num. | .05¼ | | .05¼ | |
| U. S. Motor, 69 octane num. | .05½ | | .05½ | |
| 58-60 400 endpoint gasoline | .04¼ | .05 | .04¼ | .05 |

KEROSENE

| GULF COAST— | | | | |
|---|---|---|---|---|
| 41-43 prime white | .04¼ | .04⅜ | .04¼ | .04⅜ |
| 41 water white | .04½ | .04⅝ | .04½ | .04⅝ |
| LOS ANGELES, CALIF.— | | | | |
| 41-43 water white | .03¾ | .04¼ | .03¾ | .04¼ |

LUBRICANTS

| NEW YORK (f.a.s. in bbls.)— | | | | |
|---|---|---|---|---|
| 600 filtered | .22 | | .22 | |
| 600 Warren E | .19 | | .19 | |
| 600 S.R. unfiltered | .15½ | | .15½ | |
| 650 S.R. unfiltered | .17½ | | .17½ | |
| 600 flash S.R. | .18½ | | .18½ | |
| 630 flash S.R. | .23½ | | .23½ | |
| Bright stock, No. 8 color | .23 | | .23 | |
| Bright stock, No. 6½ color, dil. | .23½ | | .23½ | |

NEUTRALS

| NEW YORK—Pale Engine Oil, Bulk (vis. at 100)— | | | | |
|---|---|---|---|---|
| 230-3¾ | .09¾ | | .09¾ | |
| 180-3½ | .09½ | | .09½ | |
| 100-2¼ | .05 | | .05 | |
| Red Engine Oil, Bulk (vis. at 100): | | | | |
| 300-6½ | .09½ | | .09½ | |
| 250-6 | .08¾ | .09 | .08¾ | .09 |
| 200-6 | .08¼ | | .08¼ | |
| Cream | .04⅞ | | .04⅞ | |

## Crude Oil Prices

### Oklahoma, Kansas, North and East Central Texas

East Texas (see note) .....$ .50
Corsicana, heavy (Jan. 20, 1933)* ..... .30
Other fields .....See gravity table

East Texas posted by Tide Water Oil Co., January 18; Sinclair Prairie Oil Marketing Co., January 18; The Texas Company, January 20; Magnolia Petroleum Co., January 20; Shell Petroleum Corp. January 19; Panola Pipe Line Co., January 20; Humble Oil & Refining Co., January 20.
*Magnolia Petroleum Co.

### West Texas

Iatan and Westbrook..Same as North Texas Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties .....See note below
Lea County, N. Mex. .....
.....See Rocky Mountain table
Toborg, Pecos County* .....$ .40

Note—Crane, Upton, etc., effective January 19 by The Texas Company, 30 cents; followed by Humble Oil & Refining Co., Magnolia Petroleum Co., Gulf Pipe Line Co., on January 20, and by other purchasers.
*Shell Petroleum Corp., January 19, 1933.

### Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties....See gravity table

### Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers .....
.....See gravity table
Jennings, La. (Jan. 20, 1933)* .....$ .35
Cameron Meadows, La. (Jan. 20, 1933)†
.....Below 20 gravity 22 cents, differential 2 cents per degree beginning with 21-21.9 at 26 cents with 40 gravity and over at 52 cents.
Refugio, light .....See gravity table
Refugio, heavy (Jan. 20, 1933)‡ ..... .45
Markham‖..See Gulf Coast gravity schedule
High Island¶ .....
.....See Gulf Coast gravity schedule
Conroe .....See note

*Gulf Refining Co. †Magnolia Petroleum Co. ‡Humble Oil & Refining Co. ‖The Texas Company. ¶Yount Lee Pipe Line Co.

Note—In the Conroe Field, effective January 19, Tide Water Oil Co. posted as follows: 35-35.9 degrees, 59 cents, with 1 cent added for each degree upward to 40 degrees and over, at 64 cents; January 20, Humble Oil & Refining Co. posted 35-35.9 degrees, 54 cents, with 2 cents added for each degree upward to 40 degrees and over at 64 cents.

### South Central and Southwest Texas

Darst Creek .....See note below
Luling (Jan. 20, 1933) .....$ .30
Mirando (Jan. 20, 1933) ..... .35
Pettus (Jan. 20, 1933) ..... .55
Salt Flat (Jan. 20, 1933) ..... .40
Lytton Springs (Jan. 20, 1933) ..... .45

Note—The Texas Company, January 19, followed by Humble Oil & Refining Co., Magnolia Petroleum Co. and Gulf Pipe Line Co., January 20. Magnolia Petroleum Co. in Luling; Magnolia, Humble and Gulf companies in Refugio crude; Humble and Gulf companies in Pettus; Humble and Gulf companies in Salt Flat; Magnolia Petroleum Co. in Lytton Springs.

### North Louisiana and Arkansas

Smackover, Ark. (all grades) .....
.....See note below
Urania, La. (Jan. 20, 1933) .....$ .25
East El Dorado, Ark. (Jan. 20, 1933)
.....See note below
Other fields .....See gravity table

Note—Smackover, all grades, effective January 19 by The Texas Company, 20 cents; January 20, Standard Oil Co. of Louisiana, 20 cents, Magnolia Petroleum Co. 20 cents, Gulf Refining Co. 30 cents, Louisiana Oil Refining Corp. 25 cents. Urania Field posted by Louisiana Oil Refining Co. and H. L. Hunt, Inc., East El Dorado, effective January 20, Magnolia Petroleum Co. 20 cents, Gulf Refining Co. 30 cents.

### Rocky Mountain States

OHIO OIL CO.-STANOLIND OIL & GAS CO.
Iles, light (Jan. 18, 1933) .....$ .40
Iles, heavy (Jan. 18, 1933) ..... .34
Fort Collins, Wellington and Greasewood, Colo., are on contract basis.
Florence (Dec. 15, 1932) ..... .57
Dutton Creek, Wyo. (Jan. 18, 1933) .. .34
Rock Creek, Wyo. (Dec. 16, 1932) .. .67
Frannie, light (Jan. 18, 1933) ..... .31
Frannie, heavy (Jan. 18, 1933) ..... .20
Salt Creek .....
See Stanolind Mid-Continent price schedule
LaBarge .....Mid-Continent gravity scale
Big Muddy (Dec. 16, 1932) ..... .75
Grass Creek (Jan. 18, 1933) ..... .62
Grass Creek heavy (Dec. 15, 1932) .. .45
Elk Basin, light (Jan. 18, 1933) ..... .62
Lance Creek (Dec. 16, 1932) ..... .92
Poison Spider (Mar. 5, 1931) .. ..... .70
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) ..... 1.10
Osage (Jan. 18, 1933) ..... .52
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Dec. 16, 1932) ..... .25
Torchlight (Jan. 18, 1933) ..... .62
Greybull (Jan. 18, 1933) ..... .62
Cat Creek (Dec. 15, 1932) ..... .87
Ponderа (Nov. 7, 1932) ..... .60
Sunburst, Mont. (Nov. 7, 1932) ..... .75
Hogback, N. Mex. (Jan. 18, 1933) ..... .65
Lea County, N. Mex. (Jan. 20, 1933) .. .30
Maijamar (Jan. 20, 1933) ..... .25
Artesia-Jackson (Jan. 20, 1933) ..... .30

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Stanolind Oil & Gas Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maijamar posted by Continental Oil Co. Lea County, effective January 20, posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa, by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

### Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective January 21, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) ....$1.47

(Continued on Page 31)

## Crude Oil Gravity Table

| Degrees gravity— | 1 Oklahoma, Kansas, North Texas, East Central and Central Texas | 2 North Louisiana and Arkansas | 3 North Louisiana and Arkansas | 4 Gray County, Texas | 5 Gray County, Texas | 6 Hutchinson, Carson and Moore Counties, Texas | 7 Hutchinson, Carson and Moore Counties, Texas | 8 Gulf Coast Texas and Louisiana | 9 Gulf Coast Texas and Louisiana | 10 Salt Creek, Wyoming |
|---|---|---|---|---|---|---|---|---|---|---|
| Below 20 | ... | ... | ... | ... | ... | ... | ... | .55 | .32 | ... |
| 20-20.9 | ... | ... | ... | ... | ... | ... | ... | .55 | .34 | ... |
| 21-21.9 | ... | ... | ... | ... | ... | ... | ... | .55 | .36 | ... |
| 22-22.9 | ... | ... | ... | ... | ... | ... | ... | .56 | .38 | ... |
| 23-23.9 | ... | ... | ... | ... | ... | ... | ... | .57 | .40 | ... |
| 24-24.9 | ... | ... | ... | ... | ... | ... | ... | .58 | .42 | ... |
| Below 25 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 25-25.9 | ... | ... | ... | ... | ... | ... | ... | .59 | .44 | ... |
| 26-26.9 | ... | ... | ... | ... | ... | ... | ... | .60 | .46 | ... |
| 27-27.9 | ... | ... | ... | ... | ... | ... | ... | .61 | .48 | ... |
| 28-28.9 | ... | ... | ... | ... | ... | ... | ... | .62 | .50 | ... |
| Below 29 | .28 | .28 | .20 | ... | ... | ... | ... | ... | ... | .28 |
| 29-29.9 | .30 | .30 | .22 | ... | ... | ... | ... | .63 | .52 | .30 |
| 30-30.9 | .32 | .32 | .24 | ... | ... | ... | ... | .64 | .54 | .32 |
| 31-31.9 | .34 | .34 | .26 | ... | ... | ... | ... | .65 | .56 | .34 |
| 32-32.9 | .36 | .36 | .28 | ... | ... | ... | ... | .66 | .58 | .36 |
| 33-33.9 | .38 | .38 | .30 | ... | ... | ... | ... | .67 | .60 | .38 |
| 34-34.9 | .40 | .40 | .32 | .36 | .34 | .31 | .29 | .68 | .62 | .40 |
| 35-35.9 | .42 | .42 | .34 | .38 | .36 | .33 | .31 | .69 | .62 | .42 |
| 36-36.9 | .44 | .44 | .36 | .40 | .38 | .35 | .33 | .70 | .62 | .44 |
| 37-37.9 | .46 | .46 | .38 | .42 | .40 | .37 | .35 | .71 | .62 | .46 |
| 38-38.9 | .48 | .48 | .40 | .44 | .42 | .39 | .37 | .72 | .62 | .48 |
| 39-39.9 | .50 | .50 | .42 | .46 | .44 | .41 | .39 | .73 | .62 | .50 |
| 40 plus | .52 | .52 | .44 | .48 | .46 | .43 | .41 | .74 | .62 | .52 |

Note—Effective January 20, the Standard Oil Co. of Louisiana posted the following prices in North Louisiana and Arkansas: Caddo, below 29 gravity, 20 cents; 40 gravity and above, 44 cents. Sabine and De Soto, below 29 gravity, 25 cents; 40 gravity and above, 49 cents. Homer, below 29 gravity, 28 cents; 40 gravity and above, 52 cents. Sarepta and Cartersville, below 29 gravity, 17 cents; 40 gravity and above, 41 cents. El Dorado, below 29 gravity, 25 cents; 40 gravity and above, 49 cents. Haynesville, below 29 gravity, 19 cents; 40 gravity and above, 43 cents. The above all carry 2 cents differential for each degree in gravity. Smackover, all grades, 20 cents.

Column 1—Effective January 18, Stanolind Crude Oil Purchasing Co., Sinclair Prairie Oil Marketing Co.; January 19, The Texas Company; January 20, Magnolia Petroleum Co. (starting at below 25 degrees, 20 cents, with 2 cents added for each degree upward); January 20, Carter Oil Co. in Oklahoma and Kansas and Humble Oil & Refining Co. in North Central and East Central Texas; January 20, Gypsy Oil Co. in Oklahoma and Kansas and Gulf Production Co. in North, Central and East Central Texas; January 19, Globe Oil & Refining Co. and Tide Water Oil Co. in Kansas and Oklahoma; January 19, Empire Pipe Line Co., Shell Petroleum Corp.; January 18, in Oklahoma, Deep Rock Oil & Refining Co., Barnsdall Refineries, Inc., Continental Oil Co., Bell Oil & Gas Co., Tide Water Oil Co., Champlin Refining Co., Anderson-Prichard Corp., Cushing Refining Co., Eason Oil Co., Johnson Oil Refining Co., Mid-Continent Petroleum Corp., Pepper Gasoline Co., Sunray Oil Co., Yale Oil Corp., Twin State Oil Co., Rock Island Refining Co.; January 20, Philtex Oil Co. and Pure Oil Co.; Oklahoma and North Texas, January 18, Continental Oil Co.; Kansas, January 18, Eldorado Refining Co., Vickers Petroleum Co., Skelly Oil Co. (starting below 25 degrees, 20 cents, with 2 cents added for each degree upward); January 19, White Eagle Oil Corp.

Column 2—The Texas Company, January 19; Louisiana Oil Refining Co., January 20; Gulf Refining Co., January 20 (starting at below 25 degrees, 20 cents, with 2 cents added for each degree upward). For Standard Oil Co. of Louisiana schedule see note below price table.

Column 3—Magnolia Petroleum Co., January 20.

Column 4—The Texas Company, January 19.

Column 5—Effective January 20, Humble Oil & Refining Co., Magnolia Petroleum Co., Gulf Pipe Line Co. Effective January 20, Phil Tex Oil Co. posted below 36 degrees, 30 cents, with 2 cents added for each degree up to 40 and above at 40 cents.

Column 6—The Texas Company, January 19.

Column 7—Effective January 20, Humble Oil & Refining Co., Magnolia Petroleum Co., Continental Oil Co. and Gulf Pipe Line Co. Effective January 20, the Phil Tex Oil Co. posted below 36 degrees, 20 cents, with 2 cents added for each degree upward to 40 degrees and above, 30 cents.

Column 8—The Texas Company, January 19.

Column 9—The Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Sun Oil Co., January 20.

Column 10—Stanolind Oil & Gas Co., January 18.

(California Crude Oil Prices on Page 31)

# TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

January 24, 1933

### Taxes

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 3 cents above the service station price for the regular grade.

### Standard Oil Co. (Indiana)

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Chicago | 14.1 | 14.1 | 4.0 | 10.0 |
| Decatur, Ill. | 15.6 | 15.6 | 4.0 | 10.1 |
| E. St. Louis | 15.9 | 13.9 | 4.0 | 9.3 |
| Joliet | 16.6 | 16.6 | 4.0 | 8.6 |
| Peoria | 16.6 | 15.6 | 4.0 | 10.1 |
| Quincy | 15.4 | 15.4 | 4.0 | 9.9 |
| Davenport, Ia. | 15.7 | 15.7 | 4.0 | 10.4 |
| Des Moines | 15.9 | 15.9 | 4.0 | 8.0 |
| Mason City | 15.7 | 15.7 | 4.0 | 9.0 |
| Sioux City | 15.3 | 15.3 | 4.0 | 10.0 |
| Duluth, Minn. | 16.7 | 16.7 | 4.0 | 11.0 |
| Mankato | 16.3 | 16.3 | 4.0 | 8.1 |
| Minneapolis | 15.4 | 14.4 | 4.0 | 11.0 |
| LaCrosse, Wis. | 17.4 | 17.4 | 5.0 | 11.1 |
| Green Bay | 16.8 | 16.8 | 5.0 | 10.5 |
| Milwaukee | 16.3 | 16.3 | 5.0 | 10.0 |
| Madison | 16.5 | 16.5 | 5.0 | 10.2 |
| Detroit, Mich. | 15.0 | 15.0 | 4.0 | 9.0 |
| Grand Rapids | 15.5 | 15.5 | 4.0 | 10.2 |
| Saginaw | 16.6 | 16.6 | 4.0 | 10.8 |
| Evansville, Ind. | 16.2 | 16.2 | 5.0 | †13.9 |
| Indianapolis | 16.4 | 16.4 | 5.0 | †14.1 |
| South Bend | 16.7 | 16.7 | 5.0 | †14.4 |
| Fargo, N. D. | 18.1 | 18.1 | 4.0 | 13.0 |
| Huron, S. D. | 17.5 | 17.5 | 5.0 | 11.8 |
| Sioux Falls | 18.0 | 18.0 | 5.0 | 10.0 |
| K. C., Mo.* | 14.1 | 14.1 | 4.0 | 8.7 |
| Springfield* | 16.0 | 16.0 | 4.0 | 8.0 |
| St. Louis | 12.5 | 12.0 | 4.0 | 9.4 |
| St. Joseph* | 13.0 | 9.9 | 4.0 | 7.5 |
| Wichita, Kans. | 14.9 | 13.9 | 4.0 | 7.0 |
| Bartlesville, Ok. | 13.5 | 16.0 | 5.0 | 8.0 |

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

### Stanolind Furnace Oil in Chicago

Effective November 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 7 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 6¾ cents; No. 3 (32-36 zero), 400 gallons or more 5.75 cents; No. 4 (13-16 zero), 400 gallons or more, 4.75 cents. Viscosity of No. 4, 90-115 at 100° F.

### Fuel Oils

### Chicago Oil Heat Institute Prices

Spot market prices on 250 gallons or over deliveries, and top prices on contracts, respectively: 33-40, 7 and 8 cents; 32-36 light, 6¾ and 7¾ cents; 32-36 dark, 6½ and 7½ cents; 28-30, 5¾ and 6¾ cents; 24-26, 5 and 6 cents; 18-22, 4¾ and 5¾ cents. On deliveries of less than 250 gallons the spot price is one-half cent higher.

### Southwestern District

MAGNOLIA PETROLEUM CO.

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Dallas, Tex. | 13.5 | 15.0 | 5.0 | 7.0 |
| Fort Worth | 12.5 | 15.0 | 5.0 | 7.0 |
| Houston | 12.5 | 15.0 | 5.0 | 8.0 |
| San Antonio | 12.5 | 15.0 | 5.0 | 8.0 |
| El Paso | 14.5 | 17.0 | 5.0 | 10.0 |
| Texarkana | *16.0 | 15.0 | 5.0 | †11.0 |
| Muskogee, Okla. | 13.5 | 16.0 | 5.0 | 8.0 |
| Okla. City | 11.5 | 14.0 | 5.0 | 8.0 |
| Tulsa | 13.5 | 16.0 | 5.0 | 8.0 |
| Ft. Smith, Ark. | *13.0 | 13.0 | 5.0 | †10.0 |
| Little Rock | 15.0 | 15.0 | 7.0 | †10.0 |

*Less 2½ cents to dealers. †Less 2 cents to dealers.

### Southern District

STANDARD OIL CO. (KENTUCKY)

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Atlanta Ga. | 18.0 | 18.0 | 7.0 | 12.0 |
| Augusta | 19.0 | 19.0 | 7.0 | 11.0 |
| Macon | 19.0 | 19.0 | 7.0 | 12.0 |
| Savannah | 19.0 | 19.0 | 7.0 | 12.5 |
| Birm'ham, Ala. | 19.0 | 19.0 | 8.0 | 12.0 |
| Mobile | 20.0 | 20.0 | 8.0 | 10.0 |
| Montgomery | 22.0 | 21.0 | 8.0 | 14.0 |
| Jackson, Miss. | 19.0 | 19.0 | 7.0 | 11.0 |
| Vicksburg | 19.0 | 19.0 | 7.0 | 12.0 |
| Jack'ville, Fla. | 19.0 | 19.0 | 8.0 | 11.0 |
| Miami | 20.0 | 20 0 | 8.0 | 12.5 |
| Pensacola | 18.0 | 18.0 | 8.0 | 12.0 |
| Tampa | 17.0 | 17.0 | 8.0 | 13.0 |
| Lexington, Ky. | 18.5 | 18.5 | 6.0 | 11 5 |
| Covington | 17.0 | 17.0 | 6.0 | 11.5 |
| Louisville | 17.0 | 17.0 | 6.0 | 10.0 |
| Paducah | 19.0 | 19.0 | 6.0 | 10.0 |

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

### Rocky Mountain District

CONTINENTAL OIL CO.

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Denver, Colo. | 14.0 | 17.0 | 5.0 | 13.5 |
| Pueblo | 14.0 | 17.0 | 5.0 | 12.5 |
| Grand Jnctn. | 18.0 | 21.0 | 5.0 | 14.5 |
| Casper, Wyo. | 16.0 | 19.0 | 5.0 | 10.0 |
| Cheyenne | 14.0 | 17.0 | 5.0 | 11.5 |
| Butte, Mont. | 20.0 | 23.0 | 6.0 | 17.0 |
| Billings | 21.0 | 24.0 | 6.0 | 15.5 |
| Great Falls | 21.0 | 24.0 | 6.0 | 17.0 |
| Helena | 21.0 | 24.0 | 6.0 | 17.0 |
| Salt Lake, Utah | 17.0 | 20.0 | 5.0 | 16.0 |
| Albu'que, N. M. | 16.0 | 19.0 | *7.0 | 14.0 |
| Boise, Idaho | 20.5 | 23.5 | 6.0 | 18.0 |
| Twin Falls | 20.5 | 23.5 | 6.0 | 18.0 |

*One-cent city tax.

### Central South District

STANDARD OIL CO. (LOUISIANA)

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| N. Orleans, La. | 15.0 | 15.0 | *7.0 | †11.0 |
| Baton Rouge | 14.5 | 14.5 | 6.0 | †11.0 |
| Alexandria | 13.0 | 13.0 | 7.0 | †8.5 |
| Lafayette | 14.5 | 14.5 | 7.0 | †10.0 |
| Lake Charles | 14.5 | 14.5 | 7.0 | †11.0 |
| Shreveport | 13.5 | 13.5 | 6.0 | †11.0 |
| Knoxville, Tenn. | 18.0 | 18.0 | 8.0 | 10.0 |
| Memphis | 16.5 | 16.5 | 8.0 | 10.0 |
| Chattanooga | 16.5 | 16.5 | 8.0 | 12.0 |
| Nashville | 17.5 | 17.5 | 8.0 | 13.0 |
| Bristol | 18.0 | 18.0 | 8.0 | 13.0 |
| Lt. Rock, Ark. | 15.0 | 15.0 | 8.0 | 10.0 |

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Two-cent discount off kerosene tank wagon price and 2½ cents off gasoline tank wagon price to dealer and commercial accounts.

### Ohio

STANDARD OIL CO. (OHIO)*

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Ohio points | 13.5 | 14.0 | 5.0 | *12.0 |

*Two cents off on gasoline tank wagon to dealers and commercial accounts; 2½ cents off tank wagon on kerosene to dealers.

### Nebraska

STANDARD OIL CO. (NEBRASKA)

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Omaha | 17.25 | 18.25 | 5.0 | 9.0 |
| McCook | 18.75 | 19.0 | 5.0 | 11.75 |
| Norfolk | 17.75 | 18.75 | 5.0 | 10.75 |
| N. Platte | 17.0 | 17.0 | 5.0 | 9.0 |
| Scottsbluff | 17.0 | 17.0 | 5.0 | 10.0 |

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

### New York and Part of New England District

STANDARD OIL CO. (NEW YORK)*

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Albany, N. Y. | 15.0 | 16.0 | 4.0 | 9.0 |
| New York | 13.5 | 13.5 | 4.0 | 9.5 |
| Buffalo | 15.0 | 16.0 | 4.0 | 9.0 |
| Rochester | 15.5 | 16.5 | 4.0 | 9.0 |
| Syracuse | 14.0 | 15.0 | 4.0 | 9.5 |
| Boston, Mass. | 13.5 | 14.5 | 4.0 | 8.0 |
| Augusta, Me. | 17.5 | 18.5 | 5.0 | 9.0 |
| Manch'tr, N. H. | 17.5 | 18.5 | 5.0 | 8.0 |
| Burlington, Vt. | 18.0 | 19.0 | 5.0 | 8.5 |

*Discount schedule to commercial accounts are as follows: At service stations, 1 cent per gallon; tank wagon deliveries up to 20,000 gallons monthly, 2 cents per gallon; 20,000 to 100,000 gallons, 2½ cents; 100,000 to 300,000 gallons, 3 cents; 300,000 gallons and up, 3½ cents.

### Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Atl'tic City, N.J. | 14.0 | 15.0 | 4.0 | 11.2 |
| Newark | 13.3 | 14.3 | 4.0 | 8.5 |
| Annapolis, Md. | 14.6 | 15.6 | 5.0 | 10.0 |
| Baltimore | 14.0 | 15.0 | 5.0 | 8.0 |
| Cumberland | 15.5 | 16.5 | 5.0 | 11.7 |
| Wash'g'n, D. C. | 12.2 | 13.2 | 3.0 | 10.0 |
| Danville, Va. | 16.7 | 17.7 | 6.0 | 11.9 |
| Norfolk | 15.1 | 16.1 | 6.0 | 10.3 |
| Petersburg | 16.2 | 17.2 | 6.0 | 11.4 |
| Richmond | 15.5 | 16.5 | 6.0 | 10.7 |
| Roanoke | 16.7 | 17.7 | 6.0 | 11.9 |
| Charls'n, W. Va. | 15.4 | 16.4 | 5.0 | 11.6 |
| Parkersburg | 14.0 | 15.0 | 5.0 | 10.2 |
| Wheeling | 15.0 | 16.0 | 5.0 | 11.2 |
| Charlotte, N. C. | 18.3 | 19.3 | 7.0 | 12.5 |
| Hickory | 18.5 | 19.5 | 7.0 | 12.7 |
| Mt. Airy | 18.6 | 19.6 | 7.0 | 12.8 |
| Raleigh | 18.1 | 19.1 | 7.0 | 12.3 |
| Salisbury | 18.4 | 19.4 | 7.0 | 12.6 |
| Charleston, S.C. | 16.1 | 17.1 | 7.0 | 10.3 |
| Columbia | 18.0 | 19.0 | 7.0 | 12.2 |
| Spartanburg | 15.5 | 16.5 | 7.0 | 12.5 |

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and Baltimore, Md., where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

### Naphtha

| | Tank: Wagon | Car |
|---|---|---|
| Oleum spirits | 10.7 | 6.23 |
| V.M.&P. naphtha | 13.7 | 7.23 |
| Cleaners' naphtha | 15.2 | 9.23 |
| Stanisol | 15.2 | 9.23 |

Tank wagon prices f.o.b. Chicago January 6, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

### Canada

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Hamilton, Ont. | 24.0 | 27.0 | 6.0 | 16.5 |
| Toronto, Ont. | 24.0 | 27.0 | 6.0 | 16.0 |
| Brandon, Man. | 30.5 | 34.0 | 7.0 | 20.5 |
| Winnipeg, Man. | 27.5 | 31.0 | 7.0 | 17.5 |
| Regina, Sask. | 30.5 | 34.5 | 6.0 | 21.5 |
| Saskatoon, Sask. | 33.5 | 36.5 | 6.0 | 23.5 |
| Edmonton, Alta. | 30.5 | 34.0 | 5.0 | 22.5 |
| Calgary, Alta. | 27.0 | 30.5 | 5.0 | 19.0 |
| Vancouver, B.C. | 28.0 | 31.0 | 7.0 | 24.0 |
| Montreal, Que. | 23.5 | 26.5 | 6.0 | 15.0 |
| St. Johns, N.B. | 27.0 | 31.0 | 7.0 | 22.0 |
| Halifax, N.S. | 26.0 | 30.0 | 6.0 | 22.0 |

### Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

| | Gasoline: Tank truck† | Posted retail | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Fresno | 19.0 | 18.0 | 4.0 | 17.0 |
| San Francisco | 19.0 | 18.0 | 4.0 | 15.5 |
| Los Angeles | 17.5 | 16.5 | 4.0 | 15.5 |
| Reno, Nev. | 23.0 | 22.0 | 6.0 | 19.0 |
| Portland, Ore. | 16.4 | 15.4 | 5.0 | 16.5 |
| Seattle, Wash. | 17.4 | 16.4 | 6.0 | 16.5 |
| Tacoma | 17.4 | 16.4 | 6.0 | 16.5 |
| Spokane | 20.9 | 19.9 | 6.0 | 20.5 |
| Phoenix, Ariz. | 18.0 | 20.0 | 6.0 | 20.5 |

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

### Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

| | Gasoline: Tank wagon | Service station | Incl'ds tax of | Kero. tank wagon |
|---|---|---|---|---|
| Pittsburgh, Pa. | 15.0 | 16.0 | 4.0 | 10.0 |
| Philadelphia | 13.0 | 14.0 | 4.0 | 10.0 |
| Scranton | 14.5 | 15.5 | 4.0 | 10.0 |
| Allentown | 14.5 | 15.5 | 4.0 | 10.0 |
| Altoona | 15.0 | 16.0 | 4.0 | 10.0 |
| Erie | 15.0 | 16.0 | 4.0 | 10.0 |
| Dover, Del. | 14.5 | 15.5 | 4.0 | 10.0 |
| Wilmington | 14.5 | 15.5 | 4.0 | 9.0 |
| Spring'd, Mass. | 14.5 | 15.5 | 4.0 | 8.0 |
| Worcester | 14.5 | 15.5 | 4.0 | 8.0 |
| Boston | 13.5 | 14.5 | 4.0 | 8.0 |
| Providence, R.I. | 12.5 | 13.5 | 3.0 | 8.0 |
| Hartford, Conn. | 13.5 | 14.5 | 3.0 | 8.0 |
| New Haven | 13.5 | 14.5 | 3.0 | 8.0 |

Discount schedule effective November 1, 1932. In Delaware and Pennsylvania, 2 cents off station price on purchases of 2,000 gallons or more per month, in remainder of territory 1 cent. Wholesale discount 2½ cents per gallon on monthly deliveries of 20,000 to 100,000 gallons, 3 cents on 100,000 to 300,000 and 3½ cents on more than 300,000 gallons.

## TANK WAGON CHANGES

(Regular Grade Gasoline)

Standard Oil Co. (Indiana) effective January 18 reduced gasoline tank wagon and service station prices throughout territory at normal points.

Atlantic Refining Co. effective January 17 reduced gasoline tank wagon and service station prices 1 cent at Philadelphia, Pa.

Magnolia Petroleum Co. reduced gasoline tank wagon price one-half cent at El Paso, Tex., effective January 18. Prices carried on gasoline tank wagon and service station prices at several points in January 12 and 19 issues were incorrect for Magnolia territory. Prices shown in table have been corrected and with the exception of El Paso were effective January 3.

Standard Oil Co. of Kentucky effective January 17 reduced gasoline tank wagon and service station prices 1 cent at Montgomery, Ala.; effective January 16 reduced kerosene tank wagon prices 1 cent at Jacksonville, Fla. Effective January 12 kerosene tank wagon prices reduced 1 cent and gasoline tank wagon and service station prices advanced 1 cent at Jackson, Miss.; effective January 13 gasoline tank wagon and service station prices reduced 1 cent at Birmingham, Ala., and on January 14 reduced an additional 1 cent; effective January 12 gasoline tank wagon and service station prices reduced 1 cent at Covington, Ky.

Standard Oil Co. of New Jersey effective January 4 reduced gasoline tank wagon and service station prices 1 cent throughout territory with exception of Washington, D. C., where no changes were made; effective January 5 gasoline tank wagon and service station prices reduced 1 cent at Hickory, Mount Airy and Salisbury, N. C.

Standard Oil Co. of Louisiana effective January 13 reduced gasoline tank wagon and service station prices one-half cent at Memphis, Tenn.

Continental Oil Co., effective January 18 reduced gasoline tank wagon and service station prices 1 cent in Montana except at subnormal points, including Butte, where no changes were made.

## CRUDE PRICE CHANGES

For crude price changes in the past week see page 16.

## APPEALS FROM REDUCED RATES

AUSTIN, Tex., Jan. 23.—The United Gas Public Service Co. has filed an appeal from gas rate reductions ordered in five Texas towns. The Railroad Commission suspended the city ordinances on reduction, pending a hearing, the company having made bond to guarantee rebates to users in case the commission finds the new rates reasonable.

## GAS REVENUE FOR EDMONTON

CHATHAM, Ontario, Jan. 21.—The city of Edmonton, Alberta, has received from Northwestern Utilities, Ltd., a check for $50,900.11 representing the 5 per cent royalty on the company's gross sales of natural gas for the 13 months ending December 31, 1932. Payment of this royalty to the city is one of the terms of the franchise.

# NEWS FOR SALES DEPARTMENTS

## Pew Protests Action of Pennsylvania's Governor

NEW YORK, Jan. 23.—J. Howard Pew, president of the Sun Oil Co., in a letter to Governor Pinchot of Pennsylvania, registers a strong protest against recommendations for highway development embodied in the governor's annual message to the state legislature.

The governor's proposal to add some 53,000 miles to Pennsylvania's highway system, Mr. Pew pointed out, would call for $400,000,000 in added construction costs, to be paid by the motorists of the state, in addition to annual maintenance costs well in excess of $50,000,000.

Commenting on Governor Pinchot's recommendation that the state gasoline tax be increased 1 cent per gallon, Mr. Pew said: "Your own administration's experience with Pennsylvania's gasoline taxes will not need to be recalled to you; it showed a reduced ratio of collections when the tax rate was raised, and an increased ratio of collections when the tax rate was lowered."

Commenting on Governor Pinchot's observation that "it is not good public policy to let the trucks ruin the railroads and injure investors in railroad securities," Mr. Pew quoted statistics indicating that railroad revenues increased almost 150 per cent from 1912 to 1929, during the years when the truck was growing in importance in national distribution. In reality, he said, the motor truck has made more tonnage for the railroads than it has taken from them, and the depression in the railroad business is due to the fact that all business is subnormal.

Should Governor Pinchot's plan for increasing road mileage in the state be carried out in its present form, Mr. Pew suggested, the railroads should make a special contribution to the cost of this improvement, as the improved road system will serve as a tonnage feeder to the railroads.

"The automotive and oil industries together," Mr. Pew concluded, "have originated more than 12 per cent of carload freight for the railroads, while the best authorities say the railroads have lost not to exceed 5 per cent of freight to the trucks. It would be just as reasonable to accuse the truck of depressing the price of farm products as to charge it with the decline in railroad revenue."

### NEW KANSAS TAX BILL

TOPEKA, Kans., Jan. 23.—The Kansas legislature is considering a bill supported by Governor Landon which will cause all purchasers of gasoline to pay the tax at the time of purchase and any legitimate refunds will be made by the the purchaser presenting a signed statement from the seller as to the date and amount of the purchase. The bill is similar to that used in Wyoming and has been approved by the American Petroleum Institute. As the result of making the bill a law the governor hopes to reduce the amount of tax exemptions which increased from $592,018 in 1928 to $2,903,966 last year.

### TO BUILD LARGE TERMINAL

NEW YORK, Jan. 23.—Colonial Beacon Oil Co., New England marketing subsidiary of the Standard Oil Co. (New Jersey) has acquired a site for a new bulk distributing and storage terminal just outside of Schenectady, N. Y. The terminal will be built several hundred feet from the Mohawk River, and a pipe line will connect it with a river wharf. A spur track will link the terminal site with the Delaware & Hudson Railroad. Considerable tankage for gasoline and other products will be constructed.

## C. F. R. Motor Method for Determining Octane Number Approved by D2

The D2 committee of the American Society for Testing Materials has approved the Co-operative Fuel Research Motor Method for determining the octane value of motor fuels subject to the results of a letter ballot of all its members. The method will likely be formally adopted as a tentative standard by the A.S.T.M. at its meeting in March. The Society of Austomotive Engineers will take action on the subject this week at its meeting in Detroit and in all probability will also accept the C.F.R. Motor Method as its standard. With practically full assurance that the motor method will be made the undisputed standard of the industry within a short time, a long program of controversy will be brought to a close.

Because the newly adopted motor method prescribes the use of a higher mixture temperature and a greater motor speed, along with other minor changes, in order to bring the results nearer to those derived from actual road tests, slightly lower laboratory results are shown. Tests made indicate that the more severe procedure reduces the octane rating of practically all motor fuels several points. It was also shown that certain motor fuels are less stable than others. Cracked gasolines seem to be penalized more than straightrun gasolines and natural gasoline blends in which Ethyl fluid are used seem to have a greater relative stability.

To compensate for the general reduction in the octane value of motor fuels, the Ethyl Gasoline Corp. is now requesting comments from its licensees asking approval from them to adjust its regulations in line with the general changes adopted by the industry. This action was prompted by the fact that the American Petroleum Institute will likely adopt the new method of test April 1 and all contracts with licensees require four months' advance notice of a change in the testing procedure.

#### Brief History

It will be remembered that when the antiknock value of gasoline was first recognized, refiners sought to establish some method of laboratory test to determine this value. The growing popularity of lead or tetra-ethyl as a knock suppresser when added to the gasoline forced recognition of some kind of a method for determining and expressing the difference in the antiknocking tendencies of all gasolines.

One of the first means of expressing this value was in terms of cubic centimeters of lead tetra-ethyl added to a "standard" straightrun Mid-Continent or Pennsylvania gasoline. Obviously, this was not satisfactory after it was shown that the straightrun gasoline of one Mid-Continent crude had a different base value than that of another Mid-Continent crude. The same applied to the gasolines made from Pennsylvania crudes.

The fact that benzol had a high natural antiknock value and was readily miscible in gasoline to make a satisfactory motor fuel, some laboratories adopted the percentage of benzol added to "standard" straightrun Mid-Continent or "standard" straightrun Pennsylvania as the basis for expressing antiknock value. Except for the fact that benzol was a little more convenient to use, there was little to be said in favor of its general adoption as a standard for the same reasons as applied in the case of using lead.

While research laboratories were in the process of finding a means of expressing antiknock value they were also at sea with respect to adopting a simple type of motor for testing the fuel. There were nearly as many different types of testing motors as there were research laboratories and it was not until the Ethyl Gasoline Corp. obtained a rather general distribution of a machine it had developed that real progress was made in the program of standardization. The Series 30 Ethyl Gasoline Corp. engine was quite generally adopted but there were objections raised to its adoption as a standard. The oil industry then sought to cooperate with automobile manufacturers to establish an impartial research committee to work out a satisfactory test method which later developed into the Co-operative Research Steering Committee.

#### Octane Number

In the meantime, Dr. Graham Edgar, of the Ethyl Gasoline Corp., presented the suggestion that a mixture of iso-octane and heptane be used as the basis for evaluating the antiknock value of motor fuels and this method has been generally adopted. Although the term "octane number" has been accepted as the index for evaluation, in reality this means the percentage of iso-octane in a blend of iso-octane and heptane, which blend has a tendency to knock equal to that of the motor fuel being tested.

The joint committee mentioned previously, developed what is now known as the C.F.R. engine and although the mechanical features of the engine went without criticism, it was found that the results it gave in the laboratory did not agree with results derived from actual road tests when the same fuels were tested in cars under driving conditions. This discrepancy was also present in tests made on other laboratory antiknock machines.

Because of this difference between laboratory results and road tests the A.S.T.M. and other authoritative testing bodies hesitated to adopt any method of test procedure as standard but to aid in bringing about a closer agreement in a test procedure than had been possible previously a complete C.F.R. test procedure was outlined and was given general distribution among the laboratories of the industry.

The method was known as the C.F.R. research method and involved using a mixture temperature of 212° F. and a motor speed of 600 r.p.m. It was found that by using a higher mixture temperature and operating the motor at a higher rate of speed, results could be obtained that would more nearly duplicate those in actual road tests. It was found that cracked gasoline made under different methods of manufacture showed a marked difference in octane stability and that natural gasoline and Ethyl blends were favored. This introduced an economic factor into the question of test procedure that was of great importance and immediately new data was requested.

The C.F.R. committee again conducted a series of road tests and after a careful check of their findings, a compromise was reached in which the method of test known as the C.F.R. Motor Method was evolved. This prescribes a mixture temperature of 300° F. and the motor is operated at 900 r.p.m.

## Change Method of Making A.P.I. Motor Fuel Forecasts

Work of preparing data upon which to base estimates forecasting consumption of motor fuels during the coming year under the direction of the American Petroleum Institute has begun with the appointment of the 1933 subcommittee of statisticians and economists of the Institute's Committee on Refinery Statistics and Economics. W. A. Sinsheimer, of H. L. Doherty & Co., New York, is the chairman of the subcommittee, succeeding A. J. McIntosh of Socony-Vacuum Corp., New York. Mr. McIntosh, who has been chairman during the past two years, remains a member of the committee.

Under a revised plan of procedure worked out at the annual meeting of the Institute in Houston, Tex., last November, the committee on statistics and economics will make four studies of motor fuel and gas and fuel oil consumption requirements each year, instead of two as in the past. Heretofore the committee has been concerned altogether with the months ahead. Now it is planned to keep up a continuous study and make revisions from time to time. In its forecast last November the committee estimated consumption for the six months' period from October 1, 1932, to March 31, 1933. During February the committee will review the figures for the first quarter and extend the forecast to June 30.

## Pacific Off-Shore Tanker Shipments Off 13 Per Cent

The Oil Producers Sales Agency estimates total off-shore tanker shipments of oil from Pacific Coast territory for 1932 at 144,854 bbls. daily against 166,-564 bbls. in 1931, a decrease of 13 per cent. Gasoline shipments averaged 60,251 bbls. daily against 75,596 bbls., a decrease of about 20 per cent.

Total oil shipments in December averaged 132,178 bbls. daily against 115,564 bbls. in December last year, but gasoline shipments averaged only 36,816 bbls. against 55,247 bbls. The increase in total traffic was due to larger movement of crude to the Orient and to more business in miscellaneous refined products.

### LET GOVERNMENT CONTRACTS

NEW YORK, Jan. 23.—The following orders for refined petroleum products have been awarded by the War Department (differences in delivery costs factor in prices paid):

Shell Oil Co., 7,000 gallons of motor gasoline at 13.1 cents a gallon and 7,000 gallons at 12.7 cents, for delivery to quartermaster at Fort Sam Houston, Texas.

Pasotex Petroleum Co., 14,000 gallons of motor gasoline at 6.125 cents per gallon, for delivery to quartermaster at Fort Sam Houston, Texas.

Porter Brotehrs Service Station, Vicksburg, Miss., 10,000 gallons of gasoline and 2,000 quarts of oil, delivery to U. S. Engineer at Vicksburg, $1.280.

The general purchasing officer, Panama Canal, Washington, D. C., will open bids January 27 for 200,000 gallons of Ethyl Gasoline.

### BELGIUM RAISES OIL DUTIES

NEW YORK, Jan. 23.—The Belgian Government has placed in operation its new oil tariff on petroleum imports, embracing sweeping upward readjustments in duty rates. Gasoline duties have been increased by 22½ centimes per litre, to a rate of 1.375 francs per litre, with kerosene rates 43½ centimes higher at 1.125 francs.

# NEWS FOR PETROLEUM REFINERS

## Pennsylvania Refiners Join to Protect Patents

The Pennsylvania Grade Crude Oil Association, in connection with the research work which the association is conducting at Pennsylvania State College, announced the formation of a patent holding corporation to secure, protect and develop patents pertaining to the improvement of products from Pennsylvania grade crude oil.

Ralph T. Zook, president of the association, was elected president of the new corporation, which will be known as the Pennsylvania Petroleum Research Corp. John Beck of Butler was elected vice president.

Fayette B. Dow of Washington, D. C., was appointed vice president and general counsel; Samuel Messer, of Oil City, was named treasurer with T. O. Grisell secretary.

Forest D. Dorn of Bradford was chosen as a director of the new company. Other directors include E. C. Breene, Oil City; Harry A. Logan, of the United Refining Co. of Warren; David B. McCalmont of Franklin; C. L. Suhr of the Pennsoil Co., Oil City, and Dean F. C. Whitemore of Pennsylvania State College.

The association finances research in the refined petroleum at Pennsylvania State College and it was with the view to protect all the developments and solutions which resulted from the experiments made at the college under the supervision of the association that the new corporation was formed.

The corporation itself will be a non-profit making company, and any money derived from the patents and processes developed will be returned to State college to further research experiments along the lines advocated by the association.

### SHAMROCK PLANT OPERATING

The Shamrock Oil & Gas Co.'s refinery at Sunray in Moore County, in the Panhandle district, is now running on a 24-hour schedule, following improvements and installation of new equipment in the plant. Capacity of the plant is 2,500 bbls. daily, and the company has sufficient stored oil at the plant to insure continuous operation for some time.

The company has taken over the pipe line running from Sunray to the Jones and Morton Pools to the south of Sunray, and also connected to the Shamrock Pool, 4 miles to the west of those two pools.

### PLANT AT TEXARKANA, TEX.

C. C. Yeager of Gladewater, Tex., has obtained a 10-acre site for the construction of a 1,000-bbl. refinery to be located at McKinney Switch, 15 miles east of Texarkana. Construction of the plant is scheduled to begin within 15 days. The plant will obtain its crude from the Miller County Field which was discovered recently.

### SMALL PLANT AT DENVER

A small refinery is nearing completion immediately to the north of Denver on Federal Boulevard at the Colorado & Southern Railroad tracks. William Arlt, of Denver, is one of the backers. It will run on Osage, Wyoming, crude and market its products at a filling station on the highway.

### TAKE OVER TANK CARS

Union Tank Car Corp. is reported to have purchased 2,100 tank cars from the Pure Oil Co. and is taking over the Pure company's repair shops at Ardmore and Muskogee. It also purchased some 200 cars from the Continental Oil Co. recently.

## Plan to Blend Alcohol and Gasoline in United States Is Held Unfeasible

As the result of the agitation from several sources in the United States to enact state or Federal laws to provide for the blending of alcohols and gasoline, investigations have been made by companies in the oil industry as to its feasibility. The blending plan is generally sponsored as a farm relief proposition, it being contended that the alcohols could be manufactured from grains and other farm products and thus widen the market for farm products.

Some of those who have sponsored the plan point out that the alcohol-gasoline blends are used in foreign countries. There are, however, a number of very important points at difference between the situation in foreign countries and the situation in the United States. In all foreign countries where alcohol is being used as a blended motor fuel, the alcohol is manufactured locally, usually by government subsidized monopoly. The gasoline, on the other hand, is an imported product subject to high import duties and taxes. Hence alcohol is usually cheaper than gasoline in countries which have no petroleum supplies of their own, since the cost of manufactured alcohol is approximately constant anywhere in the world, whereas the cost of gasoline obviously varies with the distance from the point of production and the amount of duties and taxes which must be paid on it. Moreover, the fact that the alcohol is a home product while the gasoline is imported from some foreign country has created a very strong nationalistic tendency toward the use of such blends in foreign countries.

Furthermore, the automobiles in use in most foreign countries have engines and fuel systems which differ greatly from those in use in this country. Since automobile traveling is ordinarily restricted to the confines of the particular country in question and automobiles can be designed and adjusted once and for all for the particular blend sold in the particular country, various technical difficulties which would be encountered in the United States are not met in these foreign countries.

It is, however, worthy of note that despite these facts, alcohol blends are not used appreciably even in foreign countries except in such countries as have made this entirely compulsory by law. The various proposals to this end which have been made in the United States have all fallen flat on account of the technical and economic obstacles which are inherent in the situation here, either of which are sufficient to prevent the success of such projects.

The technical obstacles are perhaps the simplest and may be discussed first. Any blend of alcohol with gasoline has a lower value to the consumer than straight gasoline, gallon per gallon, since the energy content of alcohol is 85,000 B.t.u. per gallon compared to 120,000 B.t.u. per gallon of gasoline and therefore the mileage that can be obtained therefrom is diminished. In present day cars this more than offsets any advantage which might be gained by the increased antiknock rating of such mixtures. Furthermore, it should be noted that the increased antiknock test results which may be obtained with alcohol-gasoline mixtures are somewhat illusory since under severe high temperature driving conditions there is a considerable deterioration or loss of the antiknock effect which is indicated under the relatively moderate test conditions.

In order to burn fuel mixtures containing any substantial amount of alcohol it is also necessary to make various changes in the carburetor if normal efficiency is to be maintained. In any ordinary carburetor it is necessary to enlarge the jets and enlarged jets will not, of course, work satisfactorily thereafter with ordinary gasoline. In various old type engines cork floats are used in the carburetor and such floats are attacked and disintegrated by alcohol mixtures. There is moreover a considerable tendency towards corrosion in fuel systems and in carburetors by the acids that are usually present in alcohol mixtures, which in some cases might prove quite serious.

Another technical difficulty, independent of carburetor design, is the fact that alcohol mixtures are "hard starting" and would give great trouble in our North Central United States winters, whereas straight gasoline can be and is seasonally adjusted by the major refiners so as to give the desired starting characteristics for any climatic conditions.

#### Tendency to Stratify

Perhaps the most serious technical objection to alcohol mixtures arises from their tendency, in the presence of even very small amounts of water, to separate at moderately low temperatures into two layers of widely different characteristics. In the complete absence of water gasoline and alcohol can be mixed in all proportions and such mixtures will not separate at ordinary temperatures. It is, however, impossible to manufacture alcohol completely free from water. The highest purity of alcohol that can be manufactured by ordinary methods is about 95 per cent alcohol plus 5 per cent water and the purification of this product to about 98 per cent alcohol plus 2 per cent water by special processes adds at least 25 per cent to its cost. In the presence of even such small amounts of water, mixtures of alcohol and gasoline which are stable when warm will separate out again when cold. For example, not over about 1 part of 95 per cent purity alcohol can be mixed with 100 parts of ordinary gasoline and still remain stable without separation at 10° F.

It is true, as previously noted, that this difficulty is not encountered in the absence of water. This does not, however, improve the situation greatly. Even if (at considerable added expense) the alcohol be almost completely purified from water before mixture with gasoline, it will nevertheless absorb water in storage or in automobile fuel tanks.

Gasoline is much lighter than water and has absolutely no tendency to mix with water. Hence gasoline is frequently stored over water in order to protect it from contamination from dirty tank bottoms, etc. Alcohol, however, even when dissolved in gasoline, has a very great affinity for water, will mix with water in all proportions, and will even absorb moisture from the air. This unavoidable absorption of water by the alcohol in alcohol-gasoline mixtures obviously decreases the fuel value of the mixture, and if the mixture is thereafter exposed to even moderately low temperatures it will separate into two layers and become entirely unfit for use as motor fuel.

These difficulties are not so pronounced

(Continued on Page 32)

## New Marathon Units Have Been Given Broad Rights

Negotiations directed toward the broadening of its license contract with the Standard Oil Co. (Indiana), covering cracking equipment, have been concluded by the Ohio Oil Co. According to licensors of processes involved, the agreements which were reached will permit the Ohio Oil Co. to install and operate such cracking processes as Holmes-Manley, de Florez, Cross, Tube and Tank, and combinations of these units. Heretofore, their license extended only to cover the installation of the Holmes-Manley process of which four units have been in operation, during about five years, at the plant of the Lincoln Oil & Refining Co., a subsidiary of the Ohio company, located at Robinson, Ill. Negotiations were conducted, on behalf of the Standard Oil Co. (Indiana), by Gasoline Products Co., Inc., who are also licensors for these processes.

New plant construction, in line with the broader scope of processing, was authorized by the Ohio Oil Co., following the license negotiations. Through their subsidiary, the Marathon Oil Co., they contracted with the M. W. Kellogg Co. to install a 1,500-bbl. cracking unit, for processing gas oil or topped crude, at their Fort Worth, Tex., refinery. Contract was also made with the Kellogg Co. to install a unit of similar capacity for processing topped crude at the Marathon Oil Co.'s refinery in Bristow, Okla. Both plants are to produce a high antiknock gasoline and fuel oil.

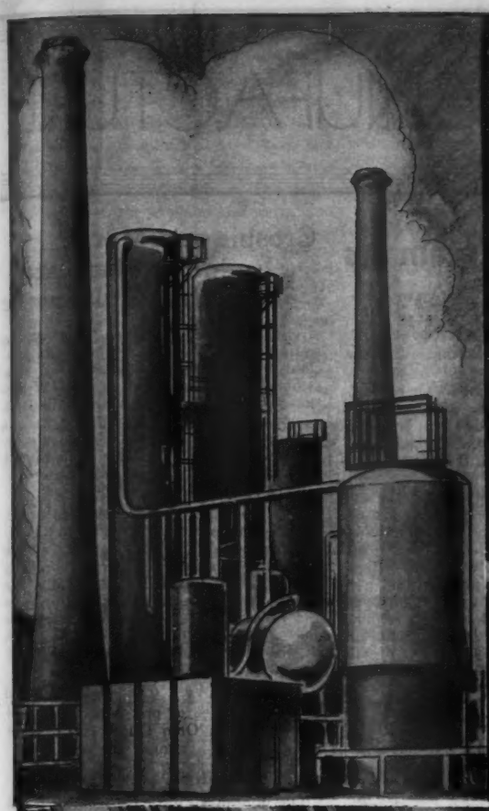
## Prepare to Extend Excise Taxes on Oil and Gasoline

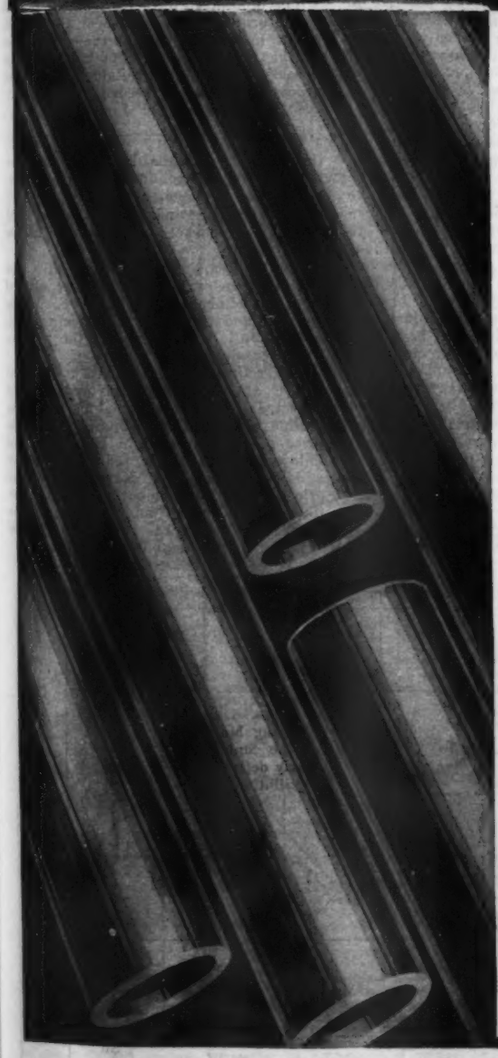
WASHINGTON, D. C., Jan. 23.—The house committee on ways and means will meet on Wednesday of this week and fix a day—probably the next week—for a hearing on the extension of import excise taxes for another year. It is accepted as conclusive that this extension will be made by the adoption of a resolution for that purpose.

The 1-cent a gallon Federal tax on domestic gasoline which expires June 30 also is looked upon as sure to be extended for another year as President-Elect Roosevelt is urging Democratic leaders to provide as much revenue in this short session as possible. This measure is estimated to produce $137,000,000 next year and hearings will be held on it.

Representative Ayers has introduced a bill which the committee will consider providing for an import excise tax on gasoline and other motor fuel one-half cent per gallon and providing that these words "shall include any liquid derivative of crude petroleum falling within the distillation limits of petroleum naphtha as that term is defined under designation D288-31T of the American Society for Testing Materials, and shall also include the content of petroleum naphtha, similarly defined, which may be separated by distillation, or any other process, from any liquid product composed in whole or in part of crude petroleum or any derivative thereof, where such content of petroleum naphtha is in excess of 50 per cent by volume.

Mr. Ayres' bill also provides for import excise taxes on crude petroleum, one-half cent per gallon; fuel oil derived from petroleum, gas oil derived from petroleum, and all liquid derivatives of crude petroleum, except lubricating oil and gasoline or other motor fuel, one-half cent per gallon; gasoline or other motor fuel, 2½ cents per gallon; lubricating oil, 4 cents per gallon; paraffin and other petroleum wax products, 1 cent per pound.





# The Quality of Timken Tubes Begins with the Steel Itself

Back of every industry that keeps abreast of the times there is usually *one* institution in that industry that keeps *ahead* of the times.

In the alloy steel and tube industry, Timken has consistently been a leader in applying new methods and creating improved alloys...

It was Timken who pioneered in the control of grain size...

It was Timken who brought the use of nickel molybdenum steels to the highest plane of development they have ever attained...

And it was Timken who established such accurate control in the manufacture of steel tubing—including the making of the steel itself—that Timken has long been *the world's largest manufacturer of alloy steel tubes.*

A complete line of Timken refinery tubes—in any analysis and any size—is available to refinery men who are quality conscious.

THE TIMKEN STEEL AND TUBE CO., CANTON, OHIO

**TIMKEN STEEL TUBES**

# NATURAL GASOLINE MANUFACTURE

## Assembling Papers For the Next Annual Gasoline Convention

The program committee of the Natural Gasoline Association of America is now assembling subject matter and choosing members to present papers for the association annual meeting to be held in Tulsa, May 15, 16 and 17. The choice of dates, was made after considering the dates for the semiannual meeting of the American Petroleum Institute which will be held in Tulsa starting May 17. The meeting of the association will end at noon on the seventeenth and the A.P.I. meeting will start that afternoon so there will be no overlapping of time. This will also facilitate a larger attendance among those members who are interested in both meetings. The program committee is composed of E. L. Peck of the Empire Oil & Refining Co., chairman, F. E. Rice of Phillips Petroleum Co., G. M. Campbell of the United Gas Public Service Co. and R. C. Wheeler of the General Petroleum Corp.

### START YATES PLANT

The Humble Oil & Refining Co. has again started up its casinghead gasoline plant in the Yates Field, Pecos County, and will run to about half of its capacity, or around 5,000 gallons of casinghead gasoline per day. This plant was built three years ago, but shut down after only a few months operation. It will operate for at least six months, utilizing well pressures instead of using compressors in the plant. The gasoline is run into the Humble Pipe Line Co.'s trunk line from the field thereby raising the gravity of the oil in the line and at the terminal.

### SUPPLY MEN'S DINNER

The stag dinner and smoker for members of the Natural Gasoline Supply Men's Association and their guests will be held February 13. The purpose of the smoker is to renew acquaintances within the association and the directorate of the Natural Gasoline Association of America, the latter being guests and also to permit prospective nonmembers among the supply men to become familiar with the efforts of the organization. A further canvas will be made later to get the names of those who wish to attend. The cost per plate has been proposed to approximate $1.

## Natural Gasoline Is Likely to Retain Its Better Relative Position During 1933

Natural gasoline prices have been improving their relative position since early in 1932 and manufacturers are of the opinion that the improved conditions will be maintained throughout 1933. The accompanying graph shows the trend of prices on all grades of natural gasoline in 1932 as published in The Oil and Gas Journal weekly together with the U. S. Motor grade refinery gasoline price. In all cases the low of the respective weekly price range was plotted and all prices reflect the market in the Mid-Continent only.

There was a period in 1932 which extended over about three months in which the purchaser could buy 2 gallons of 26-70 natural gasoline for every gallon of U. S. Motor refinery gasoline. These conditions existed throughout the greater portion of May, June and July. However, at the close of the year there was relatively little difference between the 26-70 price and that of U. S. Motor refinery gasoline.

Some of the recent improvement in the position of natural gasoline is no doubt due to the greater seasonal demand for more volatile motor fuels but this would not account for all of the change. Probably the most important factor in the change was that of curtailing manufacturing operations to a point where the production came near to demands. The efforts made by the individual companies to bring this about should not be overlooked but the greatest influence came from the outside.

The proration of crude in the Oklahoma City Field where there is a large potential gas production aided materially in holding down plant operations in the Mid-Continent area. During 1932 the output of the Oklahoma City Field was probably less than 78,000,000 gallons whereas there is plant capacity standing in the field sufficient to produce more than 1,000,000 gallons daily and had all wells been permitted to produce oil and gas without regard to market demands, conservation of resources or without regard to ultimate total recovery, probably five times as much natural gasoline could have been produced in this field alone, than was actually produced. It could have come close to equalling the actual output of all fields in Oklahoma for the year.

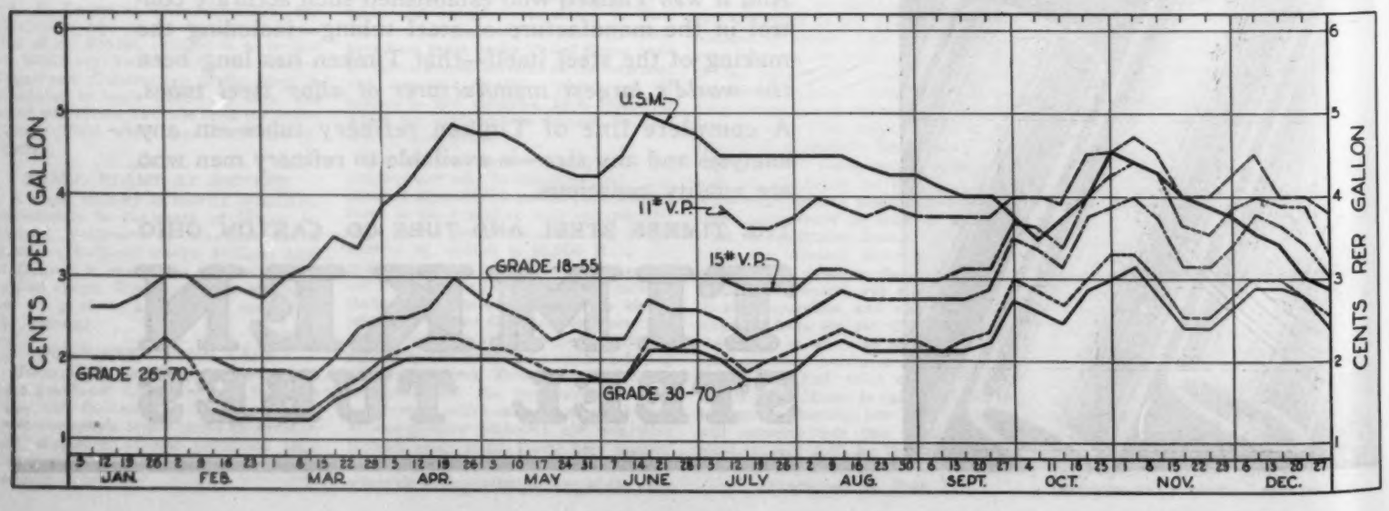
The other very important factor in holding the production of the Mid-Continent Field to the relatively low level was the absence of new flush gas producing fields. The East Texas Field introduced a tremendous problem in so far as crude oil was concerned but there was not the attendant large production of wet gas as had been the case in both the Seminole and Oklahoma City Fields. The total production of natural gasoline in the East Texas area during 1932 probably did not exceed 9,000,000 gallons, which is of little consequence when considering the volume of crude oil removed from that field. In 1932 there were 121,944,399 bbls. of oil taken and recorded from the East Texas Field. The relative importance of the natural gasoline production and the crude production in this field may be easily seen when comparing these figures.

A third important factor aided manufacturers in holding down production to demands and that was the practice of stabilizing practically all of their production. Whereas the year opened with practically all natural gasoline having a vapor pressure of 26 pounds and substantial quantities of it above 27 pounds, steps were taken in the course of the year which brought an increasing percentage of the production down to 18 pounds and the 30-70 grade which proved relatively popular early in the year was little heard of in the later months. Also, the practice of superstabilizing natural gasoline to low enough vapor pressures to permit its use as a motor fuel without blending became an important factor. This idea is not new but its adoption has not been generally favored because it places the natural gasoline industry in direct competition with its best customers the refiners and the manufacturers have hesitated to set up an independent selling organization which would represent added expense.

However, there has been a greater appreciation among refiners and jobbers alike for the lower vapor pressure grades of natural gasoline and there has been an increasing volume of the superstabilized material moving direct to jobbers. This was not only true during the recent winter months but was also true during the early fall months during which time the 11-pound, 15-pound and 18-pound vapor pressure gasolines showed market stability in price and advanced in face of a declining market on the U. S. Motor fuel.

As the year drew to a close, all three of these grades of natural were quoted at a price above that of U. S. Motor gasoline and the 1-pound grade was almost a full cent above that of the refinery gasoline price.

The refinery price showed a gradual decline starting early in November and reflected the weaker crude market. The decline seemed to anticipate the crude price reduction posted in December and followed by a further reduction in the middle of January. Natural gasoline prices dropped in sympathy with the refinery price but as may be seen in the graph, the decline was not as abrupt nor as drastic in its extent.




## Crosbie and Moran Building Plant at West Holdenville

Crosbie & Moran, Inc., are moving equipment from its Earlsboro plant location in the Seminole area to be reassembled on a plant sight in the NW Section 15-7-8, in the West Holdenville Pool, Hughes County, Oklahoma. New wells in this area have been producing a relatively large quantity of gas and some oil and the charcoal tests show a gasoline content of .3 to .8 gallon per 1,000 feet.

The new plant will be built to accommodate a throughput of gas up to 35,000,000 feet per day but during the first few months operation production probably will not exceed 12,000 gallons daily. The absorbers will operate under well pressure and except for some additional stabilizer and auxiliary equipment the new unit will be a duplicate of the original Earlsboro plant.

The new West Holdenville natural gasoline plant is the first important plant to be built in Oklahoma for more than a year.

### NEW MONTANA PLANT

The Montana Power Co. has completed its natural gasoline plant near Cut Bank, Mont., in the field bearing the same name as the town. The field is being slowly developed and the available gas being processed permits a recovery of slightly less than 1 gallon per 1,000 feet.

## Leonard Aitken, Head of Midwest, Dead in Denver

DENVER, Colo., Jan. 23.—Leonard L. Aitken, president of the Salt Creek Producers Association, Inc., and the Midwest Oil Co., died in his home here last week after a long illness. Mr. Aitken was mediator in the litigation a few years ago between the Armour interests and Jesse A. Dubbs over royalties from operators using the Dubbs cracking process and is credited with having brought about the settlement of that famous case. He became president of the Midwest Oil Co. in 1915 and continued in that office until his death. He was born in Viola, Ill., September 4, 1871, received his early education at Morgan Park, Ill., and then attended the University of Chicago. For five years he taught school and then attended the Kent Law School in Chicago, from which he graduated. He then came west to look after some mining interests and became identified with Verner Z. Reed and associates, who organized the Midwest company.

## Co-operation by States Will Bring Stabilization

(Continued from Page 8)

principal oil-producing states to control production pursuant to a sound conservation program.

"A sound conservation program must, however, in the public interest, include these factors: (a) Preservation of the 350,000 small wells of settled production; (b) very drastic limitations on new pools which will discourage wildcatting under present conditions; and (c) the limitation of existing flush pools to the requirements of the market. These conditions require the co-operation of only three or four states. Is it not possible for these states and the industry to so co-operate as to remove distress production to make possible the preservation of old wells by a price which will pay the cost of pumping and to stabilize the industry on a basis of sound conservation?"

### DENY REFINERY PLANS

Widely circulated reports to the effect that the Pan American Petroleum & Transport Co. is to spend several million dollars in building new refineries at Baltimore, Md., and Houston, Tex., were denied last week by the company. Through its subsidiary, the Mexican Petroleum Co., the Pan American company has an asphalt plant at Baltimore. This plant is to be enlarged to include facilities for making gasoline and other products as announced in the January 19 issue of The Oil and Gas Journal. The Pan American for some time has had a tract of land along the Houston Ship Channel but has no plans to build a refinery.

### TO ENTERTAIN "NEWCOMERS"

HOUSTON, Tex., Jan. 23.—Houston oil men will play host to the many "newcomers" to the Gulf Coast at a banquet and stunt program to be held at the Rice Hotel Saturday night, January 28. The banquet and program will be in charge of the Houston wildcat committee which is composed of executives either of oil companies or companies of allied industries and is an organization which usually furnishes the fun and entertainment for the various oil meetings at Houston. As is customary at such functions, Frank Carothers of Norval-Wilder Supply Co., is scheduled for the star act.

## Commercial Discounts Are Increased on East Coast

(Continued from Page 23)

ticipated, and with export buying likewise at a low ebb, relatively little tonnage is moving on spot.

#### Petrolatum

Pharmaceutical and cosmetic manufacturers were in the market for supplies in fair volume during the week, and the market undertone was fairly steady on the white grades.

On the darker grades, however, demand had eased off somewhat, and while refiners did not revise their quotations, the market position was somewhat inclined to softness.

#### Lubs

Continued weakness in crude oil has tended to undermine the market position, and cylinder oils were showing weakness again. Sellers on spot did not revise their quotations further, but buyers were underbidding the market and some shading was reported.

Demand is stil considerably below par for all grades of cylinder oil, with export buyers still inclined to hold off placing actual orders in the hope that further cuts in crude oil quotations will force lub oil prices to still lower levels.

A moderate movement of red and pale oils for domestic consumption was reported last week, with quotations remaining unchanged on all grades.

### DR. GEORGE CURME HONORED

As "one of the greatest living exponents of aliphatic chemistry," Dr. George Oliver Curme, Jr., of New York, has been awarded the Chandler Medal for 1933, it is announced by Prof. Arthur W. Hixson of the department of chemical engineering in Columbia University, chairman of the award committee. Doctor Curme, a member of the American Chemical Society, is vice president, chief chemist and director of research of the Carbide & Carbon Chemicals Corp.

### KANSAS GEOLOGICAL SOCIETY

The Kansas Geological Society has elected the following officers: President, N. W. Bass, U. S. Geological Survey; vice president, E. C. Moncreif, Derby Oil Co.; secretary-treasurer, L. R. Fortier, Shell Petroleum Corp. R. A. Whortan, Producers & Refiners Corp., was elected director for a two-year term.

### MARYLAND'S OIL TAX

Gasoline and motor vehicle taxes represented 44.2 per cent of all the revenues from taxation collected by the State of Maryland during the last fiscal year, an analysis of the State's income discloses. Gasoline alone contributes $8,005,513 brought into the state treasury 31.3 per cent of the aggregate.

### FRANCHISE TAX COLLECTED

AMARILLO, Tex., Jan. 23.—Through a franchise tax levied against the Amarillo Gas Co. the city of Amarillo has collected $1,519.69 for July, August and September, 1932.

## Crude Oil Prices

(Continued from Page 25)

| | |
|---|---|
| **Pennsylvania Grade Oil in Southwest Pennsylvania Lines** | 1.17 |
| **Penna. Grade Oil in Eureka Pipe Line Lines** | 1.12 |
| **Penna Grade Oil in Buckeye Pipe Line Lines** | .97 |
| **Corning Grade Oil in Buckeye Pipe Line Co.'s line (Oct. 4, 1932)** | .70 |
| **Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931)** | .60 |
| PENNZOIL CO. (Effective January 21, 1933) | |
| **Pennsylvania Grade Oil in National Transit Lines:** | |
| Group A | $1.42 |
| Includes Cochran, Franklin, Hamilton and Doolittle districts. | |
| Group B | 1.41 |
| Includes Titusville district. | |
| Group C | 1.40 |
| Includes Turkey and Tidioute districts. | |
| Group D | 1.39 |
| Includes Bear Creek and Porkey districts | |
| Group E | 1.37 |
| Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts. | |
| Price depends on length of pipe line haul to plant at Oil City. | |
| TIDE WATER PIPE CO. (Effective January 21, 1933) | |
| Bradford, Pa. | $1.47 |
| Allegany, N. Y. | 1.47 |
| PURE OIL CO. (Effective January 21, 1933) | |
| Cabin Creek, W. Va. | $1.12 |
| Bradford Hollow, W. Va. | 1.12 |
| Kelly's Creek, W. Va. | 1.12 |

### Middle Western States

| | |
|---|---|
| OHIO OIL CO. (Effective January 18, 1933) | |
| Lima (Jan. 10, 1933) | $ .70 |
| Wooster | .70 |
| Illinois | .62 |
| Indiana | .60 |
| Princeton | .62 |
| Plymouth | Shut in |
| Western Kentucky | .57 |
| Midland, Mich. (Dec. 31, 1932)* | .95 |
| Somerset, Ky. (Jan. 19, 1933) | .45 |
| Hart County, Ky. (Dec. 21, 1932)† | .55 |
| Muskegon, Mich. (Jan. 18) | See note |

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Muskegon posted by Naph Sol Refining Co. and Old Dutch Refining Co.: Below 29 degrees, 51 cents, with 2 cents added for each degree upward to 40 and above at 75 cents. †Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

### Mexico

| | |
|---|---|
| Panuco* | $ .45 |

*F.o.b. ship, based on November transactions and exclusive of production and export taxes and bar dues.

### Canada

| | |
|---|---|
| Ontario (Jan. 18, 1933): | |
| Petrolia* | $1.60 |
| Oil Springs* | 1.67 |
| Alberta (Apr. 22, 1932): | |
| Turner Valley†: | |
| Crude oil 40-44.9 | 1.56 |
| Crude oil 45-45.9 | 2.18 |
| Crude oil 50 and above | 2.80 |
| Crude naphtha | 3.32 |
| Discolored naphtha | 2.08 |

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

# California Crude Oil Prices

**STANDARD OIL CO. OF CALIFORNIA**
**(Effective June 26, 1932)**

For current purchases of crude oil at the well (unless otherwise specified.) (All gravities above those quoted take highest price offered in that field.)

| Gravity— | Signal Hill (Long Beach) | Seal Beach, Alamitos Heights, Huntington Beach | Inglewood | Playa Del Rey | Olinda-Brea Canyon | Torrance | Richfield | Coyote Hills | Santa Fe Springs | Midway-Sunset, Elk Hills, Buena Vista Hills | Lost Hills | Athens, Rosecrans, Domingues | Montebello | Wheeler Ridge | Coalinga | Whittier-La Habra |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-14.9 | $.65 | $.65 | $.65 | $.65 | $.65 | $.65 | $.65 | $.65 | .... | $.55 | $.55 | .... | $.65 | $.55 | $.55 | $.65 |
| 15-15.9 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 |
| 16-16.9 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 |
| 17-17.9 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 |
| 18-18.9 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 |
| 19-19.9 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 |
| 20-20.9 | .69 | .69 | .71 | .69 | .69 | .69 | .69 | .65 | .... | .59 | .59 | .... | .65 | .57 | .59 | .68 |
| 21-21.9 | .74 | .74 | .77 | .74 | .74 | .74 | .74 | .66 | .... | .63 | .63 | .... | .67 | .60 | .62 | .72 |
| 22-22.9 | .79 | .79 | .82 | .78 | .79 | .79 | .79 | .70 | .... | .69 | .69 | .... | .70 | .63 | .65 | .77 |
| 23-23.9 | .84 | .84 | .88 | .82 | .84 | .84 | .84 | .76 | .... | .75 | .75 | .... | .73 | .66 | .68 | .83 |
| 24-24.9 | .89 | .89 | .92 | .86 | .89 | .89 | .89 | .81 | $.73 | .81 | .81 | $.89 | .76 | .69 | .72 | .89 |
| 25-25.9 | .93 | .93 | .... | .91 | .93 | .93 | .93 | .86 | .79 | .87 | .87 | .93 | .80 | .72 | .75 | .... |
| 26-26.9 | .97 | .97 | .... | .96 | .97 | .... | .... | .90 | .84 | .92 | .91 | .97 | .... | .... | .... | .... |
| 27-27.9 | 1.00 | .... | .... | .... | 1.00 | .... | .... | .94 | .89 | .97 | .94 | 1.00 | .... | .... | .... | .... |
| 28-28.9 | 1.02 | .... | .... | .... | 1.02 | .... | .... | .98 | .94 | 1.02 | .99 | 1.02 | .... | .... | .... | .... |
| 29-29.9 | 1.06 | .... | .... | .... | .... | .... | .... | 1.02 | .98 | 1.07 | 1.02 | 1.06 | .... | .... | .... | .... |
| 30-30.9 | 1.09 | .... | .... | .... | .... | .... | .... | 1.05 | 1.02 | 1.12 | 1.05 | 1.09 | .... | .... | .... | .... |
| 31-31.9 | .... | .... | .... | .... | .... | .... | .... | .... | 1.06 | .... | .... | 1.12 | .... | .... | .... | .... |
| 32-32.9 | .... | .... | .... | .... | .... | .... | .... | .... | 1.10 | .... | .... | 1.15 | .... | .... | .... | .... |
| 33-33.9 | .... | .... | .... | .... | .... | .... | .... | .... | 1.14 | .... | .... | .... | .... | .... | .... | .... |
| 34-34.9 | .... | .... | .... | .... | .... | .... | .... | .... | 1.18 | .... | .... | .... | .... | .... | .... | .... |
| 35-35.9 | .... | .... | .... | .... | .... | .... | .... | .... | 1.22 | .... | .... | .... | .... | .... | .... | .... |

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same price as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon and Olinda, up to 25.9 degrees; Richfield, Midway-Sunset, Kern River, Mount Poso, Round Mountain and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 83 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents, 30 degrees and over, 98 cents. In Rosecrans, General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 85 cents, and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s rices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Dominguez, Santa Fe Springs, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Belridge and Coalinga.

**Kettleman Hills**—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03. Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

**Santa Paula**—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.9 degrees, 66 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

**Shields Canyon and South Mountain**—The Texas Company, effective June 26, posted same prices as in Santa Paula.

**Orcutt**—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22-22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 92 cents.

**Playa Del Rey**—Subject to a field gathering charge of 5 cents per barrel.

**Newhall, McKittrick and Kern River**—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

**Elwood Terrace**—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

**Ventura Avenue**—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees, 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

**Ferrero**—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Domingues.

## Alcohol-Gasoline Blend Is Unfeasible in United States

(Continued from Page 28)

in foreign countries since in many of these countries gasoline is stored and sold in tins and hence is protected from any contact with water or atmospheric moisture until loaded into the customer's fuel tank. These difficulties can also be reduced by the addition of benzol (made from coal tar) as an added constituent of the mixture, as is done in some foreign countries. The supply of benzol in the United States is, however, very limited and its cost is relatively high and fixed by factors outside of control by legislation. This does not, therefore, add appreciably to the practical possibility of the use of such mixtures.

As previously stated, the foregoing technical obstacles alone would offer an insurmountable barrier to the success of any local or territorial project involving the compulsory use of alcohol in admixture with gasoline.

### Economic Factors

In addition, however, to these obstacles there are equally potent economic barriers to the success of such projects.

First and foremost, the current selling price of gasoline at North Central states refineries is less than 5 cents per gallon. Opposed to this the actual cost of manufacture of alcohol of 95 per cent purity from the present cheap molasses is about 20 cents per gallon and the selling price is over 30 cents per gallon. Many extravagant claims as to the low cost of alcohol manufactured from excess farm products have been made.

Actually the process costs (exclusive of raw material cost) are greater than when using molasses as raw material, as is indicated by the fact that practically all commercial formation operations use molasses as raw material despite the tremendous surplus of farm products. The net result is that in order to manufacture alcohol from corn at a total manufacturing cost of 20 cents per gallon, the price that can be paid for the corn is only 20 to 25 cents per bushel at the alcohol plant. In order to realize even this manufacturing cost large and efficient centralized distilleries must be built, which means that the above mentioned and already low allowable corn price is subject to further deductions for freight to these central points. This cannot be avoided by establishing a large number of decentralized small distilleries close to the source of supply, since the highest operating costs of such small plants, as compared to large plants, would more than counterbalance the saving in freight.

One common fallacy in the proposals which have been made in the United States for blending alcohol with gasoline, is to disregard distribution costs. In other words, the promoter sets up his alcohol cost as so much at the distillery and compares this with gasoline selling for 15 to 20 cents at the pump. On this basis he arrives at certain conclusions which are far from the truth. When gasoline is selling for 15 to 20 cents at the pump the refiner is receiving not over 5 cents per gallon at the refinery, the difference representing various distribution costs plus taxes.

In other words, this is squarely a proposition of mixing an inferior diluent costing 25 cents per gallon with a product worth only 5 cents per gallon, and finding someone to bear the added cost. It is obvious that with gasoline selling below 5 cents at refineries any added cost cannot be borne by refiners themselves but must be borne by the consuming public. There are, of course, different ways of passing this along. It has been proposed as one possibility that such alcohol-gasoline mixtures would be sold tax free, or at least free of state taxes. On the other hand it might take the form of a general price advance. Inevitably, however, regardless of the mechanism the only effect of any such project would be to tend to subsidize certain groups of the farm public at the direct expense of the gasoline consuming public. Furthermore, it should be realized that most of the tax thus levied on the gasoline consuming public would never get to the farmer at all but would go to the equipment manufacturers, the banks that advanced the capital for plant construction, the railroads, the plant operators, etc.

### Manufacturing Viewpoint

Last, but perhaps most important, is the fact that under any probable conditions alcohol can be made more cheaply from other materials than from excess farm products. In the first place, molasses is a necessary evil by-product of the sugar cane industry which must be produced and which is only worth what it can get from the alcohol producers. If alcohol prices are depressed by subsidized production of alcohol from farm products it will merely mean that the present alcohol producers will pay less for the molasses. Furthermore, alcohol can be manufactured from petroleum raw materials, at present and prospective crude oil prices, at as low or lower cost than from any other raw material. Between 10 and 15 per cent of the alcohol produced in the United States last year was manufactured from petroleum products and this percentage is increasing.

In other words, any law, local, state or otherwise compelling the admixture of alcohol to gasoline sold as motor fuel, and intended to help the farmer by increasing the consumption of farm products, would be foredoomed to failure in this objective unless it further required that the alcohol should be manufactured from a certain product or be purchased from a certain organization. Any such law as this would be practically impossible to enforce, and unquestionably unconstitutional.

It should also be added that the general sale of alcohol in gasoline mixtures as motor fuel would greatly increase our current difficulties with the bootlegging and illegal sale of various forms of potable alcohol. Briefly, it would be difficult to prevent the possibility of shaking up a few gallons of such motor fuel with a gallon of water and thereby obtaining with no further trouble over a gallon of drinkable "moonshine." In addition to this, there would also, of course, be greater danger of diversion of the alcohol before mixing if every small refinery or blending plant had to buy and use large quantities of alcohol, however, well denatured.

## Evaluation of Properties Requires Many Factors

(Continued from Page 13)

It is the amount which would be paid to a prudent insurance company in consideration for a guarantee of the return of the investment under the given set of conditions. It is entered in the column corresponding to the time in which the investment is anticipated.

Expense items usually include salaries and wages; supplies; transportation; workmen's compensation insurance; property insurance against loss by fire, winds, floods, etc.; repairing, cleaning, redrilling, etc.; treatment of oil; rentals; taxes; share of general expense, or overhead.

### Summation

After we have completed our entries in the various time columns for each of the items of receipts and expenditures, we are then ready to bring down the footings by columns. Commonly we find that a large part of the excess of receipts over expenditures falls in columns representing time several years in the future. In such cases the deferment of the receipts amounts to a very large factor in our valuation. If we assume that the earning power of capital is at the rate of 7 per cent per annum—or, if you choose, that the cost of the use of money is at the rate of 7 per cent per annum—then, $1 to be received five years in the future is worth only 71.3 cents today; and, $1 to be received 10 years in the future is worth only 50.8 cents today. Accordingly, we apply this factor, either in red or black, to the above mentioned footings and then total the resultant footings to find the present net worth of the property under consideration.

The figures on the various summary sheets which are made in the above described manner now need to be brought into a summary of summaries on the basis of logically thought out probabilities, and then we get that tediously sought for "bottom figure."

We have it by this method with a full realization of its range of uncertainties. The realization of the range of uncertainties has led some to assert that it is nonsense to attempt to appraise petroleum properties in cases where the basic data admit of wide range, but such attitude is, of course, manifestly unsound.

Any given petroleum property will yield ultimately some definite return, and therefore has a value. To hope to predict exactly what that definite return will be would be preposterous. But to arrive by logical processes from all available significant facts at a single figure comprehending a proper appraisal of all the uncertainties is not preposterous. It is distinctly the job of any man who has a petroleum property which might be sold and equally the job of any man who has control of capital for investment in petroleum properties.

In this commodity where market values commonly vary so widely from intrinsic values, there is an unusual opportunity for the man who will properly determine intrinsic values.

The preceding discussion sets forth in a nutshell what I consider to be a sound method of valuation. It is about the process which must be gone through to determine the intrinsic value of a petroleum property.

### Short-Cuts

Of course we have short-cuts. But I desire to warn against the too long continued use of any short-cut without giving it a thorough checking. Short-cuts usually involve the summation of several elementary factors. These factors do change, and we must modify our short-cuts accordingly. I am quite aware that certain factors commonly have such a wide range of possibilities that refinements in other factors may be disproportionate and unnecessary. But, nevertheless, it is worth while to occasionally get down to bedrock and look into the future in a detailed way.

### Formulation of Deals

I desire to call your special attention to one feature of the realization and proper appraisal of uncertainties. Deals to fit particular situations may be formulated. Deals involving contingent payments of various types, including bonuses, oil payments, overriding royalties, division of the working interest, etc., may serve to get buyer and seller in agreement when they have widely divergent ideas on the basis of a simple cash deal. Consideration of income taxes is important in this connection.

### Changes in Industry

The importance of taking cognizance of changes in the industry demands emphasis. The mere fact that recovery has been on the order of about 20 per cent in certain types of pools can not be assumed to be, in itself, proof that recovery from the same type of pools will in the future be about 20 per cent. That the price of oil of certain characteristics has, in the past, born certain relationship to the price of certain other oil, does not mean that such relationship shall continue into the future. The mere fact that the cost of wells of certain specifications during the past three years has been an average of some definite amount is no more than a mere guide in estimating future costs of similar wells. Methods of operation change, and no valuation can approach accuracy without recognizing such changes. We must look into the future and use the past for what it is worth—no more.

### Accounting

For many factors in our valuation we depend largely on accountants, and permit me to warn you that accounting is commonly conducted by men with viewpoints too limited. Much advance in petroleum production accounting has been made in recent years through efforts at standardization of accounting systems, but there is yet room for considerable improvement.

The single greatest step forward came as a result of the allowance by the Federal Government of the depletion deduction in income tax returns. I have delved considerably into joint operating accounts and even under similar contracts I have found wide variations in accounting. Such variations commonly have enormous effect upon the net worth of properties and should be given due consideration in making valuations. Here, again, I desire to emphasize the importance of a thorough understanding of all existing contracts pertinent to the operation of the property under consideration or pertinent to the sale of its products.

### Prospective Purchaser

Even a brief presentation of this sort cannot properly be concluded without calling to attention the necessity of consideration of the viewpoint of the prospective purchaser. The property may have one value to one buyer and quite a different value to another buyer.

The physical situation of the property may fit in with properties of a certain buyer so as to give him special advantages in marketing the products or in conducting the operations. The qualifications of the buyer cannot be neglected in estimating the quantities of production and the costs of securing same. We cannot assume efficient operation when we know that the operator has a background which would not justify anticipation of efficient operation in the future. We know that certain individuals and certain companies are not prepared to accept the benefits of progress, and this cannot be ignored in making a valuation for them.

The property may require a large outlay of money in order to follow the most effective program of development, and in that case we must consider the possibility of that program not being followed because of insufficiency of capital.

Furthermore, the actual intrinsic value of a property may be really quite definite, although the range of possible net yields might be so great that it would be undesirable for a company with small capital, yet, at the same price, it would be a good buy for a company with large capital.

This point can be made clear by use of a simplified example—one typical of purely exploratory projects, but not representative of what are properly called petroleum properties. A project costing $20,000 with one chance of netting $300,000 to nine chances of resulting in total loss would not be desirable for an operator with only $100,000, while it would be a good buy for an operator with $200,000 or more. I might add that an operator who would pay more than $30,000 for the project, regardless of his capital, is of the type who plays slot machines. Of course, there are in the industry executives who play slot machines. On the other hand, there are also men of the other extreme who bring slow, but sure, death to their companies through what they call conservatism.

## TEST FOR CARBON REMOVER

To determine the stability of a decarbonizing agent, under severe conditions, Dr. George Calingeart, director of chemical research for the Ethyl Gasoline Corp. has equipped a toy wagon with 42 electrically heated fluid injectors and run on a bumpy track to duplicate as near as possible in the laboratory, actual road conditions.

The compound under investigation is placed in one of the injector bowls and tested periodically to determine whether it has deteriorated. This factor is important for in actual use motorists will travel many miles and may hold the compound in the injector bowl for several weeks before using it and it will be necessary that the action of the compound not be impaired in the meantime because of instability.

# East Texas Proration Order Before Federal Court With Tyler Hearing Postponed Meanwhile

By L. E. BREDBERG

DALLAS, Tex., Jan. 23.—The last proration order in East Texas, which went into effect January 1, will be tested in Federal court on January 27 at Houston. Consolidation of numerous cases has been made in order to try all of them at the same time. If the present order fails in Federal court another method of proration will have to be devised.

Rowan & Nichols Oil Co. of Fort Worth has asked for a permanent injunction against the Railroad Commission to prevent enforcement of the order.

The Railroad Commission hearing which was to convene at Tyler on January 26, for the third time, has been called off so that members of the commission could attend the Houston hearing. If the court holds against the commission on this new order, the hearings held at Tyler may be cancelled.

Another attack has been made on the present "market demand" law. State Senator Joe Moore introduced a bill in the senate to repeal the law and re-enact the old law based on "physical waste."

With the field being cut to 290,000 bbls. per day, and a shut in of production from December 17 to January 1, holding approximately 5,000,000 bbls. of oil off of the market, and a new proration method being put into effect, operators are sorely disgruntled because of the two recent price cuts. They feel they should have been rewarded for the cooperation in curtailment instead of being further penalized.

### Affidavits on Shipment

Another kind of injunction was granted in the field January 23 when the Big Sandy Oil & Refining Co., which is associated with the V. O. E. Wright interests of Gladewater, secured a temporary restraining order preventing the Railroad Commission from interfering with shipment of 200 cars of crude oil. Judge James C. Wilson of the Federal court, Fort Worth, said the temporary restraining order would not apply to subsequent shipments, if the commission followed its announced policy of permitting transporters or shippers to base their affidavits upon the original clearance papers accepted by the commission.

Allowing the shipment of oil without affidavit as this shipment was allowed to be done under the restraining order opens an outlet which could easily tear down the whole proration structure in East Texas, other companies obtaining crude and shipping it by tank cars without furnishing affidavit as to its having been produced in compliance with commission orders.

Tender of the oil to the Cotton Belt Railroad had been declined for shipment since the Big Sandy Oil & Refining Co. did not furnish such affidavits. Counsel for the company alleged that the oil had been purchased from a party who had purchased it from another source and that it had lost its identity.

A similar case was heard during the investigation at Tyler on January 21 when a representative for the Pure Van Pipe Line Co. stated that he had not asked for an E-N form nor had made one out himself on crude taken from another line which had in turn taken it from a third line. Col. E. O. Thompson of the Railroad Commission said that hereafter all transporting companies would be required to fill out E-N forms, and that said forms would be amended so as to allow for succeeding companies filling them out as they received and passed the oil to other transporters or receivers. As a result of this amendment all oil will be traceable from the well to its destination.

### Restraining Orders

Restraining orders were turned in against several alleged proration violators at Austin on January 19, the attorney general's department filing the application for the Railroad Commission. Included in this list of violators is the Atlantic Oil Producing Co. which had representatives on the stand for three days at the Tyler hearing. An injunction and penalty suit charged the company with overproducing approximately 4,300 bbls. of oil from January 1 to January 8. The temporary injunction was issued restraining the company from producing in excess of the allowable, and the State asked the maximum penalty of $1,000 per day for each separate act of violation. The company has 107 wells on 11 leases.

Restraining orders were also issued against the Mollie Oil Co., Gladewater, and Olvey and Sample of El Dorado, Ark. A mandatory injunction was issued against the Pittman Oil Corp. requiring that company to allow commission employes to gauge its wells.

### Marginal Well Order

The commission's latest order affecting East Texas pertains to the "marginal well" law which authorizes a well to produce 40 bbls. daily if "on the pump" and more than 3,500 feet deep, which most of the wells in the field are.

The new order provides that deputy supervisors shall investigate reports on "marginal wells" to determine if the facts represented by the owner or operator are correct. This will be done to prevent installation of pumping equipment in flowing wells merely to obtain the top allowable of 40 bbls. daily. The maximum allowable of any flowing well in the field is now 31 bbls. daily.

The section of the order dealing with this particular question reads: "That the owner and/or operator of each and every well in said field which is or may hereafter be in the marginal class, as defined by law, shall immediately report to the chief investigating officer of the commission in said field the name, number and location of said well, certifying under oath that said well is in fact a marginal well as defined by law. Thereupon, the chief investigating officer of the commission in said field shall cause to be made an investigation of the matters contained in the report so filed and if the facts are found to be true as reported, such officer shall issue to the owner and/or operator of such a well a permit to produce the amount of oil daily from such well as it is entitled to produce under the marginal limit fixed by law as appropriate to a well of its depth."

There are approximately 200 pumping wells in the field at the present time. If the wells are not flowed wide open when they are opened to make their daily allowable paraffin gives trouble and in some cases almost necessitates installation of pumping equipment to produce the wells, but such trouble is not an excuse for allowing to produce well by pumping, according to the new order and court action will probably be difficult to invoke in order to obtain permit to allow a well to produce the marginal limit.

The greatest number of the pumpers is on the east edge of the Joiner area, in the Juan Ximenes and M. J. Pru Surveys, Rusk County. Other pumpers are located on the east edge of the field, while a few are also located on the west and northwest edge of the field.

## East Central Texas Wildcats

**Week Ending January 23**

| Company, well, farm name, section and block— | Remarks: |
|---|---|
| **ANDERSON COUNTY** | |
| Barclay et al's No. 1 J. C. Beard, 150 ft. out of most westerly NE cor. of 178-ac. lease, J. Trimmer Sur. | S.D. 1,518 ft. |
| C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in 8½ of 129-ac. tract, M. Main Sur. | T.D. 1,538 ft. |
| **ANGELINA COUNTY** | |
| Crosbie et al's No. 1 John C. Davis, 150 ft. from N of center of tract and survey, John H. Graham Sur. | S.D. 646 ft. |
| W. J. Chandler's No. 1 L. J. Dearman, 350 ft. from S and W lines of 20-ac. tract, J. T. Peavy Sur. | S.D. 1,680 ft. |
| **BOWIE COUNTY** | |
| Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur. | Coring 3,030 ft. |
| Tom Bell et al's No. 1 C. M. Moss, 1,800 ft. from N line and 2,160 ft. from W line of 465-ac. tract and survey, O. D. Walton Sur. | Drlg. 1,616 ft. |
| **CHEROKEE COUNTY** | |
| Barkley Tate et al's No. 1 H. E. Neal, 330 ft. from N and W lines of tract, J. M. Prosella Sur. | Derrick. |
| Hooper et al's No. 1 Doctor Overton, 330 ft. from N and E lines of tract and 330 ft. out of most easterly NE cor. of survey, Wesley Dikes Sur. | T.D. 3,656 ft. |
| L. J. Hopcroft et al's No. 1 J. R. Taylor, 2,600 ft. from E line and 2,000 ft. from S line of survey, G. M. Doherty Sur. | Location. |
| Loring Oil Co.'s No. 1 F. M. Swearingen, 330 ft. from S and E lines of 68-ac. tract, 2,300 ft. from W line and 330 ft. from S line of survey, Oliver Lund Sur., 1 mile SW of Maydelle | Fishing for drill pipe; T.D. 4,951 ft. |
| Mid-Tex Oil Co.'s No. 1 A. Pace (formerly Clopton), 358 ft. from N line and 330 ft. from most northerly E line of 40-ac. lease, Wesley Dikes Sur. | Waiting on cmt. to set; T.D. 3,665 ft. |
| Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur. | Prepare to deepen; T.D. 3,600 ft. |
| **DELTA COUNTY** | |
| Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur. | S.D. 3,813 ft. |
| **ELLIS COUNTY** | |
| Armstrong Bros.' No. 1 Reeves | S.D. 300 ft. |
| Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. | S.D. 1,435 ft. |
| George Beasley's No. 1 Francis Borck, 850 ft. from SW line and 350 ft. from S and E lines of tract and grant, 11 League grant | Rig up. |
| Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Waxachachie, E. C. Branch Sur. | S.D. 1,050 ft. |
| Paris Oil Co.'s No. 1 O. S. Bain, 1,500 ft. from S line and 300 ft. from W line of 60-ac. lease, R. M. Williams Sur. | S.D. 985 ft. |
| **FRANKLIN COUNTY** | |
| Whiteoak Oil Co.'s No. 1 O. C. Clanton, 750 ft. from S line of survey and 150 ft. from W line of survey, S. McCreary Sur. | Derrick. |
| **FREESTONE COUNTY** | |
| Clyde Creighton's No. 1 Holley Bros., 854 ft. from W line and center of N and S lines of lease, A.B.M. Sur. | S.D. 3,669 ft. |
| **GREGG COUNTY** | |
| C. H. Brown et al's No. 1 Johnson, center of 1½-ac. lease, G. W. Hooper Sur. | Waiting on cmt. to set; T.D. 3,631 ft. |
| Bay Oil Corp.'s No. 5 J. M. Wheeler, 150 ft. due N of Pelphrey Bros.' No. 1 Wheeler, D. Ferguson Sur. | Derrick. |
| Burke Royalty Co.'s No. 1 Carr, center of 200-ac. tract and lease, M. McCurry Sur. | Drlg. 2,705 ft. |
| Byrd-Frost Oil Co.'s No. 3 J. J. Reppond, 330 ft. from S and E lines of 50-ac. lease, D. Sanches Sur. | Rig up. |

(Continued on Page 36)

### Completions and Locations

Completions in the field picked up this week amounting to 54, while locations dwindled slightly to 44. There were no locations staked for wildcat tests, but two such tests, one in Wood and one in Ellis County were abandoned as dry.

Another shallow producer was completed in the field this week. The Monte Oil Co. completed its No. 3 Finn in the D. Ferguson Survey at a total depth of 740 feet. The shallow sand was topped at 720 feet. The wells flowed 375 bbls. of fluid per day, 60 per cent of which is fresh water.

The railroad commission ordered the working over of one regular Woodbine sand well in this area to stop seepage of oil through split casing up to the shallow water sand which is being developed by the shallow wells.

Farrell Drilling Co. is waiting on casing before it tests sand topped at 3,641 feet in its No. 1 W. W. Hammett in the Walker Pettit Survey in the south end of the Joiner area, southern Rusk County. The test is a south offset to the Wemack Oil Co.'s gasser completed several months ago, and which recently started producing some oil with the large volume of gas. Total depth of the Farrell test is 3,651 feet.

Stanolind Oil & Gas Co. is testing its No. 1 Bettie Coleman, in the James Burke Survey, on the east edge of the gas area in southern Rusk County. It topped the sand at 3,597 feet and is standing with hole bottomed at 3,625 feet. If it makes a producer it will extend the field a short distance to the east.

### Wildcatting Activities

Bridwell and others have a rig up approximately one-half mile southwest of Myers and others' No. 1 Olson test near Brownsboro in Henderson and are going to give this area its second test. The location is in the center of the north 40 acres of the 80-acre J. T. Debman tract in the J. N. Sullivan Survey. The Myers

test is drilling at 3,755 feet with no showings of oil.

McElreath and Suggett of Fort Worth have taken an 8,000-acre block in the Wyche, S. Hatton, Aaron Mitchell, Thomas H. Moore and J. Lawson Surveys, Henderson County, adjoining the Humble Oil & Refining Co. and Murchison block to the west, extending as far north as Cranfill and Germany's No. 1 Starr dry hole.

LaRue and others are taking a block for the American Liberty Oil Co. of Dallas. Location of block is 2 miles west of Athens in the F. Ball, C. M. Walters, J. Henderique and Stanford Hallman Surveys.

Flannigan and Foster are moving in material for their No. 1 T. W. Davidson which is 330 feet from the south and east lines of an 80-acre tract in the J. P. Bullock Survey northeast of the Shasta Oil Co.'s dry hole, and northwest of Meadows' dry hole in Harrison County. Shasta Oil Co.'s No. 1 Hall had saturated sand but tested salt water and was abandoned.

Killem and Chisum's No. 1 N. E. Clark, in the J. Thomas Survey, southeast of the Van Field, Van Zandt County, was given up this week as a dry hole at 3,036 feet. Woodbine sand was topped at 3,006 feet.

Lyons and Tolbert's No. 1 Chatham, located on a 14-acre tract in the Jamestown townsite, W. A. McKee Survey, northeast of the Longview area, Upshur County, tested 210 feet of oil and mud through drill stem. The test was shut down and rig moved off, as was done on Wadley and others' No. 1 Jones in the J. M. Dunn Survey, to the south. That test logged sand from 3,686 feet and was bottomed at 3,701 feet. The Chatham test is standing at 3,718 feet. Elevation is 287 feet. Elevation of the Jones test is 263 feet. The owners have purchased considerable acreage and royalty in this area and have made mystery wells out of both of them. They have another test drilling 3 miles north of Jamestown on the Duffy farm in the Thomas Starr Survey. Another test is drilling on the W. M. Shettlesworth farm in the J. M. Dunn Survey, one-half mile north of the Jones test. It is below 2,325 feet. Surface elevation is 298 feet. Cash and oil is being paid for the acreage being taken by Wadley and associates on this trend.

During the week ending January 16 oil movements averaged 348,050 bbls. daily, or 52,950 bbls. above reported production.

### COMPLETIONS IN EAST TEXAS

#### North Gregg County

Atlantic Oil & Production Co.'s No. 12 Judge, top sand 3,499 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,525 feet; its No. 29 Moore, top sand 3,486 feet, initial production 64 bbls. per hour through open tubing, total depth 3,530 feet.

Barnsdall Oil Co.'s No. 10 G. E. Adams, top sand 3,579 feet, initial production 105 bbls. per hour through open tubing, total depth 3,642 feet.

Roy Bumpass and others' No. 1 fee, top sand 3,636 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,658 feet.

Jim Cloud Oil Co.'s No. 3 B. C. Christian, top sand 3,602 feet, initial production 84⅓ bbls. per hour through 1-inch tubing choke, total depth 3,660 feet.

Faith Oil Co.'s No. 3 Barrett, top sand 3,647 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,672 feet.

Gulf Production Co.'s No. 33 J. C. Judge, top sand 3,527 feet, initial production 100 bbls. per hour through three-quarters-inch tubing choke, total depth 3,652 feet.

Humble Oil & Refining Co.'s No. 12 H. M. Lawrence, top sand 3,636 feet, initial production 81 bbls. per hour through three-quarters-inch tubing choke, total depth 3,667 feet.

Magnolia Petroleum Co.'s No. 6 Allen, top sand 3,639 feet, initial production 128 bbls. per hour through 1-inch tubing choke, total depth 3,650 feet; its No. 10 H. Hampton, top sand 3,703 feet, initial production 168 bbls. per hour through 1-inch tubing choke, total depth 3,711 feet; and its No. 5 G. W. Richey, top sand 3,617 feet, initial production 152 bbls. per hour through 1-inch tubing choke, total depth 3,628 feet.

Monte Oil Co.'s No. 3 M. Finn, top sand 720 feet, initial production 375 bbls. fluid per day, 60 per cent water, through open 2-inch tubing, total depth 740 feet. (D. Ferguson Survey.)

Lewis Sikes' No. 5 Stencil, top sand 3,706 feet, initial production 40 bbls. in one-quarter hour through open tubing, total depth 3,708 feet.

Sinclair Prairie Oil Co.'s No. 9-A J. W. Akin, top sand 3,580 feet, initial production 50 bbls. in one-quarter hour through open tubing, total depth 3,614 feet.

Stanolind-Simms-Peachblossom's No. 9 Key, top sand 3,532 feet, initial production 31 bbls. in one-quarter hour through open tubing, total depth 3,625 feet.

Superior Oil Co.'s No. 13 Ingram, top sand 3,491 feet, initial production 43 bbls. in one-quarter hour through open tubing, total depth 3,548 feet; its No. 6 A. Jones, top sand 3,593 feet, initial production 41 bbls. in one-quarter hour through open tubing, total depth 3,670 feet.

Yount-Lee Oil Co.'s No. 4-B Denson, top sand 3,645 feet, initial production 74 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,658 feet; its No. 5 Tuttle, top sand 3,607 feet, initial production 84 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,627 feet.

#### South Gregg County

Atlantic Oil & Production Co.'s No. 3 G. Davis, top sand 3,546 feet, initial production 85 bbls. per hour through open tubing, total depth 3,570 feet.

Gulf Production Co.'s No. 3 G. W. Longley, top sand 3,609 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,621 feet; its No. 9 A. Muckelroy, top sand 3,524 feet, initial production 67 bbls. per hour through three-quarters-inch tubing choke, total depth 3,539 feet.

Roger Lacy's No. 1 fee, top sand 3,569 feet, initial production 50 bbls. in one-half hour through one-half-inch tubing choke, total depth 3,589 feet.

McCulloch Oil Co.'s No. 2 Knowles, top sand 3,645 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,655 feet.

Magnolia Petroleum Co.'s No. 7 S. Carr, top sand 3,437 feet, initial production 144 bbls. per hour through 1-inch tubing choke, total depth 3,442 feet; No. 6 Davis, top sand 3,645 feet, initial production 40 bbls. in 20 minutes through 1-inch tubing choke, total depth 3,664 feet; its No. 11 Griffin, top sand 3,558 feet, initial production 110 bbls. per hour through 1-inch tubing choke, total depth 3,598 feet; No. 3 N. Towels, top sand 3,654 feet, initial production 168 bbls. per hour through 1-inch tubing choke, total depth 3,664 feet; and its No. 3 V. Wells, top sand 3,619 feet, initial production 194 bbls. per hour through 1-inch tubing choke, total depth 3,625 feet.

#### North Rusk County

Humble Oil & Refining Co.'s No. 4-C H. Sexton, top sand 3,716 feet, initial production 45 bbls. per hour through three-quarters-inch tubing choke, total depth 3,736 feet.

Lucey Petroleum Co.'s No. 4 D. B. Gill, top sand 3,717 feet, initial production 31 bbls. per hour through three-quarters-inch tubing choke, total depth 3,720 feet.

Magnolia Petroleum Co.'s No. 3 V. H. Barton, top sand 3,717 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,732 feet.

Tide Water Oil Co.'s No. 4-A F. L. Buntyn, top sand 3,645 feet, initial production 20 bbls. in 10 minutes through open tubing, total depth 3,665 feet.

#### South Rusk County

American Liberty Oil Co.'s No. 1-E Strickland, top sand 3,603 feet, initial production 30 bbls. per hour through 2-inch open tubing, total depth 3,616 feet.

Gulf Production Co.'s No. 3 Elnora Cole, top sand 3,784 feet, initial production 90 bbls. per hour through three-quarters-inch tubing choke, total depth 3,793 feet.

Humble Oil & Refining Co.'s No. 5 R. A. Barksdale, top sand 3,789 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,792 feet; its No. 8 G. G. Turner, top sand 3,796 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,806 feet; its No. 15-A R. E. L. Silvey, top sand 3,685 feet, initial production 60 bbls. per hour through three-quarters-inch tubing choke, total depth 3,750 feet; its No. 8 A. L. Walker, top sand 3,662 feet, initial production 48 bbls. in one-half hour through three-quarters-inch tubing choke, total depth 3,682 feet; its No. 6-B H. White, top sand 3,632 feet, initial production 22 bbls. per hour through three-quarters-inch tubing choke by heads, total depth 3,720 feet.

Mid-Kansas Oil & Gas Co.'s No. 11 Mc. DeGuerin, top sand 3,617 feet, initial production 92 bbls. per hour on 2-inch lead, total depth 3,692 feet; its No. 28 W. T. Grissom, top sand 3,640 feet, initial production 140 bbls. per hour on 2-inch lead, total depth 3,670 feet; its No. 36 W. T. Grissom, top sand 3,661 feet, initial production 76 bbls. per hour on 2-inch lead, total depth 3,668 feet.

Sun Oil Co.'s No. 4 R. J. Hendon, top sand 3,549 feet, initial production 42 bbls. per hour through open 2-inch tubing, total depth 3,600 feet.

The Texas Company's No. 15 W. W. Henry, top sand 3,638 feet, initial production 115 bbls. per hour through open 2-inch tubing, total depth 3,643 feet.

R. C. Payne's No. 1 Redwine, top sand 3,505 feet, initial production 25 bbls. in 20 minutes through 2½-inch open tubing, total depth 3,608 feet.

Stanolind and Pure Oil Co.'s No. 19 R. A. Moores, top sand 3,638 feet, initial production 29 bbls. in 25 minutes through three-quarters-inch tubing choke, total depth 3,683 feet.

#### Smith County

Mid-Kansas Oil & Gas Co.'s No. 11 J. H. Sharp, top sand 3,663 feet, initial production 44 bbls. per hour on 2-inch lead, total depth 3,685 feet.

#### Upshur County

Creighton Drilling Co.'s No. 2 Hargraves, top sand 3,738 feet, initial production 92 bbls. in one-quarter hour through open tubing, total depth 3,750 feet.

H. W. Elliott and others' No. 1 W. H. Reid, top sand 3,669 feet, initial production 40 bbls. per hour through tapered tubing, total depth 3,685 feet.

Harper & Neff's No. 1 B. F. Phillips, top sand 3,665 feet, initial production 90 bbls. in 10 hours, total depth 3,667 feet.

Magnolia Petroleum Co.'s No. 9 H. Hampton, top sand 3,058 feet, initial production 188 bbls. per hour through 1-inch tubing choke, total depth 3,676 feet.

Perrin & Fell's No. 4 C. C. Landers, top sand 3,710 feet, initial production 30 bbls. per day, by heads, total depth 3,744 feet.

Waggoner and others' No. 2 Williams, top sand 3,747 feet, initial production 30 bbls. per hour through open tubing, total depth 3,750 feet.

### WILDCAT COMPLETIONS

#### Ellis County

Armstrong's No. 1 Milton Cook, dry and abandoned, total depth 460 feet.

#### Wood County

Sinclair Prairie Oil Co.'s No. 1 M. R. Sayner, top Pecan Gap 3,069 feet, base 3,270 feet; top Austin chalk 4,240 feet; top Navarro 2,000 to 2,020 feet; top Taylor 2,660 to 2,680 feet; top Gober 3,980 to 4,000 feet; top Vaginulina 3,744 to 3,754 feet; dry and abandoned; total depth 4,379 feet. (J. M. Chandler Survey.)

#### Van Pool—Van Zandt County

Pure Oil Co.'s No. 6 O. L. Swain, initial production 100 bbls. first 24-hour gauge after choked for proration, total depth 2,901 feet.

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# Percentage Depletion Is Held Allowable by Revenue Bureau in Disputed Case

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Jan. 23.—Complying with a request for an opinion in the case of a bonus for an oil or gas lease received before the property covered by the lease became productive, C. M. Charest, general counsel for the Bureau of Internal Revenue, states in an opinion just rendered, that percentage depletion is allowable, if at the time the bonus was received the future production of oil or gas from the property was practically assured, or the property became productive during the taxable year.

This opinion was requested relative to the application of the decision of the U. S. Supreme Court in the case of Murphy Oil Co. against Burnet, December 5, 1932, and to certain situations arising in connection with the allowances of percentage depletion in the case of a bonus paid for an oil or gas lease.

"Although the U. S. Supreme Court had before it in the Murphy case a question which arose in connection with an allowance for depletion based on cost," says Mr. Charest, "some of the language used by the court appears to be equally applicable to certain situations arising in connection with percentage depletion."

The general counsel of the bureau then quotes in part the decision of the Supreme Court as follows:

". . . . .when the execution of an oil or gas lease is followed by production of oil, the bonus and royalties paid to the lessor both involve at least some return of his capital investment in oil in the ground for which a depletion allowance must be made under Section 234. . . . . A distinction between royalties and bonus. . . . . making no provision for a reasonably anticipated production of oil on the leased premises, would deny the 'reasonable allowance for depletion' which the statute provides. . . . ."

Mr. Charest then concludes: "The four situations to which attention is called are as follows:

"1. No oil being produced when the bonus was received, but future production practically assured because of nearby wells and geological indications.

"2. No oil being produced when the bonus was received, but property became productive within the taxable year.

"3. No oil being produced when the bonus was received, and not more than a speculative prospect of future oil production at that time, but property is now known to have become productive after the taxable year.

"4. Property has never become productive.

"It is stated in substance that it is the opinion of the income tax unit that a practical application of the law and the regulations in the light of language used in the Murphy Oil Co. case would be to allow depletion in situations (1) and (2) and to deny it in situations (3) and (4).

"After consideration of the question," Mr. Charest closes, "this office is of the opinion that the conclusion reached by the unit is correct and should be applied in the disposition of future cases involving this issue."

# Cowden Area, Ector County, Texas, Appears to Have Been Extended by New Landreth Well

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Jan. 23.—Landreth Production Co.'s No. 1 Holt, located in the C of the SE of Section 15, Block 43, Township, 1n, T.&P. Survey, 2½ miles north of the Stanolind Oil & Gas Co.'s nearest Cowden producer in northern Ector County, is now appearing as a producer and a probable extension to the Cowden area. Whether the production of this area will link with that of the Addis well 18 miles farther to the south will be determined later when tests are drilled on the intervening acreage.

Latest reports from the field state the test was drilling at 4,345 feet in lime after topping the pay at 4,305 feet. It swabbed 40 bbls. in 12 hours and appears a producer. Elevation is 3,078 feet. Elevation of the nearest Stanolind producer is 3,053 feet. It topped the pay at 4,130 feet and is standing at total depth of 4,244 feet. Pay in the second Stanolind test was topped at 4,120 feet. Elevation of that well is 3,065 feet and total depth is 4,302 feet.

Another test is reported for Section 33, Block 43, Township 1s, T.&P. Survey.

Harrison, Turner and others' No. 1 Addis in Section 35, Township 2s, T.&P. Survey, 18 miles to the south, is now bottomed at 4,050 feet. It is averaging 277 bbls. daily but is said to be pinched. The owners were silent about the test while it was deepening.

### Will Make Second Deep Test

The Stanolind Oil & Gas Co. and others are to make a second test on their No. 1 J. S. Todd in Section 67, Block UV, G.C.&S.F. Survey. It is now drilling below 7,735 feet and test is to be made around 7,770 feet. At 7,735 feet it is 488 feet in the Ellenberger lime. Tests in the Big Lake Field, Reagan County, are producing as deep as 500 feet in the Ellenberger.

The first production test in this deep wildcat was made at 7,357 feet where it cored saturated lime. It failed to make any appreciable showing of oil or gas at that depth and has been drilling deeper in an effort to pick up a soft spot in the lime and other saturation.

The Eppenauer Drilling Co. of San Angelo is now drilling a shallow test on the unitized block. This is being done in order to validate leases on the block before February 23, in case the Ordovician test fails to prove a producer and validate leases on the 4,000-acre block.

The Eppenauer Drilling Co. drilled in Continental Oil Co.'s No. 1 Todd in Section 26, Block WX, G.C.&S.F. Survey, and moved machine from that well to the unitized block. The Continental well is pumping 126 bbls., thereby validating leases on around 3,000 acres held by that company in the area. The company's second test, in Section 23, same block, evidently missed the shallow pay picked up in Section 26 for it is drilling below 1,640 feet. Pay in the well in Section 26 was logged at 1,545 feet. The company has made location for two more tests in this area. They can be checked on the drilling report carried in this issue.

### Test in Sterling County

Sterling County is to receive the first test drilled in that county in a long time. Fullick and Johnson have made a location in Section 7, Block 12, S.P. Survey, for a 1,500-foot test. It is located on the J. T. Davis land. Rig has been completed and it will soon be ready to spud.

Two wells of Dunnigan Brothers and Hyer in the pool south of Abilene in Taylor County, have been treated with acid, both wells responding to the treatment. Eastland Oil Co. and others' No. 3 Hunter, one of the wells, was treated with 500 gallons of acid and started flowing four days after the acid was put in.

Dunnigan's original well in the field was treated with 1,000 gallons of acid. Pressure was placed on the acid by 136 bbls. of oil being dumped in the hole, then 175 bbls. more oil was dumped to bring the pressure on the acid up to 250 pounds. After swabbing out oil and acid it started off making 200 bbls. of oil, of which 160 bbls. was salable. It is now making 70 bbls. per day, a much better average than before being treated.

### WICHITA FALLS AND PANHANDLE

Regardless of the cutting of prices in the Ranger and Wichita Falls districts during the week, many new locations were staked. However, new activities have been few in the Panhandle district during the past few weeks, with but a few wells being completed in the district from time to time. Only one location was made in the district this week, while no well was reported completed.

Jarrett Oil Corp. has abandoned its No. 1 Scaling in the Jones Gambill Survey, Abstract 168. Total depth is 3,502 feet. The test was in an area only tested by shallow tests, consequently the deeper test was an interesting one, though proving a failure.

### COMPLETIONS IN WEST TEXAS DISTRICT

#### Howard County

James and others' No. 3 Chalk, top pay 1,164 feet, initial production 20 bbls. in 18 hours pumping, total depth 1,165 feet.

Sinclair Prairie Oil Co.'s No. 3 Dodge, top pay 2,495-2,510 feet, shot 300 quarts 2,660-2,800 feet, initial production first 24 hours 282 bbls. after shot, pumped 86 bbls. first 12 hours, total depth 2,800 feet.

#### Loving County

Martin's No. 2 Freels, total depth 4,262 feet, plugged back to 4,259 feet, top salt 725 feet, top lime 4,205 feet, shot 210 quarts 4,205-59 feet, initial production 350 bbls., top of pay 4,239 feet.

#### Pecos County

Cardinal Oil Co.'s No. 15 E. Tippett, top pay 570 feet, initial production 60 bbls. oil and 15 bbls. of water, total depth 575 feet.

#### Winkler County

Richardson and others' No. 1 Scarborough, top salt 1,250 feet, top pay 2,878 feet, increase at 2,915 feet and 2,965 feet, initial production 172 bbls.

#### Ward County

Gulf Production Co.'s No. 26 O'Brien, total depth 2,719 feet, plugged back to 2,685 feet, initial production 189 bbls.

## Wildcat Operations in West Texas

Week Ending January 23

| Company, well, farm name, section and block— | Remarks: |
|---|---|
| **BREWSTER COUNTY** | |
| Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur. | S.D. 1,935 ft. |
| E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur. | S.D. 1,302 ft. |
| Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E, Sec. 31, Blk. 352, W. J. Mitchell Sur. | S.D. 500 ft. |
| Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur. | S.D. 2,900 ft. |
| Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine | S.D. 1,750 ft. |
| **CONCHO COUNTY** | |
| Beasley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur. | T.D. 2,586 ft.; pumping 5 bbls. oil per day and some water. |
| Simmons et al's No. 1 Schultz, 150 ft. from W and center N and S of E half of J. Weber Sur., Abst. 154. | S.D. 1,500 ft. |
| **CROCKETT COUNTY** | |
| Chambers et al's No. 1 Hoover, 1,650 ft. N and 330 ft. from E, Sec. 1, Blk. FF, B.&B. Sur. | S.D. 2,100 ft. |
| Continental Oil Co.'s No. 1 Todd, 660 ft. from S and E of Sec. 23, Blk. WX, G.C.&S.F. Sur. | Fishing 1,453 ft. |
| Continental Oil Co.'s No. 1 Todd, 1,640 ft. from S and 660 ft. from E, Sec. 26, Blk. WX, G.C.&S.F. Sur. | Top pay 1,545 ft.; T.D. 1,548 ft.; swabbing 6 bbls. per hour; preparing to pump. |
| Continental Oil Co.'s No. 1-A Todd, 660 ft. from N and W, Sec. 28, Blk. WX | Location. |
| Continental Oil Co.'s No. 1-B Todd, 660 ft. from N and E, Sec. 31, Blk. WX | Location. |
| Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur. | Spudded and S.D. |
| Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur. | Drlg. 7,705 ft. |
| The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, I.&G.N. Sur. | T.D. 2,071 ft. |
| J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur. | Drlg. 2,032 ft. |
| **CULBERSON COUNTY** | |
| Harris & Haun's No. 1 fee | S.D. 2,670 ft. |
| Milton-Dorsey's No. 1 Biggs, 4,181 ft. from N and 150 ft. from E, Sec. 2, Blk. 112, P.S.L. Sur. | Location. |
| **ECTOR COUNTY** | |
| J. M. Cooper et al's No. 1 Cowden, 2,310 ft. from S and W, Sec. 16, Blk. 43, Twp. 2s, T.&P. Sur. | Location. |
| L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. | T.D. 4,050 ft. |
| Landreth Prod. Co.'s Holt, C SW of SE Sec. 15, Blk. 43, Twp. 1n, T.&P. Sur. | Drlg. 4,245 ft. |
| Stanolind O. & G. Co.'s No. 1 Cowden, 330 ft. from S and 1,320 ft. from W, Sec. 26, Blk. 43, Twp. 2s, T.&P. Sur. | Derrick. |
| Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur. | S.D. 1,950 ft. |
| H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 2s, G. M. M.Br.&A. Sur. | S.D. 3,605 ft. |
| **EL PASO COUNTY** | |
| Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247 | S.D. 3,190 ft. |
| **FISHER COUNTY** | |
| Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E. Sec. 200, Blk. 1, B.B.B.&C. Sur. | T.D. 6,078 ft. |
| O'Donnell's No. 1 Pardue, 330 ft. from S and E lines of N half of SW Sec. 202, B.B.B.&C. Sur. | Rigging up. |
| Southern Oil Co.'s No. 1 Beavers, 330 ft. from W and 660 ft. from S of S half of SW Sec. 193, B.B.B.&C. Sur. | Rigging up. |
| Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. | T.D. 3,105 ft.; T.P. 3,105 ft.; showed water. |
| **GARZA COUNTY** | |
| Southern Oil Corp.'s No. 1 Boren, 990 ft. N, 660 ft. E, Sec. 36, Blk. 5, H.&G.N. Sur. | Machine. |
| **GLASSCOCK COUNTY** | |
| Lawson's No. 2-B Edwards, 330 ft. from S and W, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur. | Ran csg.; T.D. 1,130 ft. |
| Llano Oil & Dev. Co.'s No. 1 Edwards, 330 ft. S and E, Sec. 17, Blk. 33, Twp. 2s, T.&P. Sur. | Drlg. 1,212 ft. |

(Continued on Page 37)

### ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending January 21 follow:

| | |
|---|---|
| **WYOMING** | |
| Salt Creek | 20,600 |
| Big Muddy | 1,870 |
| Badger Basin | 50 |
| Dallas-Derby | 560 |
| Dutton Creek | 80 |
| Elk Basin | 580 |
| Ferris | 20 |
| Frannie | 370 |
| Grass Creek | 1,690 |
| Greybull | 10 |
| Hudson | 320 |
| LaBarge | 950 |
| Lance Creek | 100 |
| Lost Soldier | 2,520 |
| Midway | 110 |
| Osage | 820 |
| Pilot Butte | 30 |
| Rock River | 1,500 |
| Poison Spider | 50 |
| Teapot | 20 |
| Total Wyoming | 32,250 |
| **MONTANA** | |
| Buckley-Border | 450 |
| Cat Creek | 800 |
| Cut Bank | 160 |
| Dry Creek | 20 |
| Kevin-Sunburst | 3,180 |
| Lake Basin | 50 |
| Pondera | 900 |
| Total Montana | 5,560 |
| **COLORADO** | |
| Florence | 230 |
| Fort Collins and Wellington | 770 |
| Iles Domes | 520 |
| Moffat | 620 |
| Orchard | 190 |
| Rangely | 100 |
| Tow Creek | 260 |
| Total Colorado | 2,690 |
| **NEW MEXICO** | |
| Artesia | 406 |
| Caprock | 735 |
| Hogback | 210 |
| Jal | 1,032 |
| Table Mesa | 70 |
| Eunice | 510 |
| Hobbs | 24,978 |
| Lea | 2,285 |
| Texas-Pacific | 94 |
| Rattlesnake | 865 |
| Total New Mexico | 31,176 |
| Total Rocky Mountain area | 71,676 |
| Total previous week | 66,790 |
| Difference | 4,886 |

## East Central Texas Wildcats

(Continued from Page 33)

A. P. Carr's No. 2 G. W. Rickey, N offset to Barker's No. 1 Rickey, William Carlton Sur. ..... Waiting on cmt. to set; T.D. 3,530 ft.

J. W. Crockett's No. 1 B. D. Russell, NW offset to Schulman's No. 1 Doris, M. V. Winkle Sur. ..... Waiting on standard rig; T.D. 3,540 ft.

Daniels & Sheppard's No. 1 W. P. Crews, N offset to Boggett & Bayer's No. 1 Herions of Jerico, J. W. Bradshaw Sur. ..... Set surface csg.

J. E. Davant's No. 2 R. H. Rowland, 300 ft. S and 50 ft. W of Magnolia's No. 2 R. H. Rowland, M. V. Winkle Sur. ..... Swabbing; will not flow; T.D. 3,563 ft.

Joe Edgar et al's No. 2 Stinchcomb, 79 ft. N and 36.4 ft. W of most northerly SW cor. of Stanolind's Key lease, W. H. Hart Sur. ..... Moving in.

E. & F. Oil Co.'s No. 2 M. Jackson, 330 ft. from S line and center of E and W lines of 16.66-ac. lease, G. F. Penn Sur. ..... Derrick.

Faith Oil Co.'s No. 4 J. C. Barrett, B. W. Witcher Sur. .. Rig up and S.D.

Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. ... Derrick.

Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 300 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. ..... Will not flow; T.D. 3,593 ft.

P. L. Hoffman's No. 2 Phillips, 330 ft. from W line and center of N and S lines of lease, D. Ferguson Sur. ..... Rig up.

E. M. Jones' No. 1 L. D. Crim, 330 ft. from N line and center of E and W lines of 10-ac. tract, M. V. Winkle Sur. ..... Swabbing; T.D. 3,593 ft.

Edwin Lacy's No. 2 fee, center of 1½-ac. tract, M. V. Winkle Sur. ..... Location.

J. M. Lapin's No. 1 fee, 427 ft. S and 224 ft. E of NE cor. of Humble's Knowles lease in 1.09-ac. tract, M. V. Winkle Sur. ..... Reaming to set csg.; T.D. 3,582 ft.

Jack T. Life's No. 1 B. Moore, center of 1.75-ac. lease, D. Moore Sur. ..... Derrick.

Lion Oil & Refining Co.'s No. 2 Evans, S offset to Sinclair Prairie's No. 10 Williams, P. McAnnelly Sur. .. Derrick.

Magnolia Petroleum Co.'s No. 3 J. H. Beavers, 313 ft. from N line and 373 ft. from E line of lease, T. R. Rains Sur. ..... Location.

Magnolia Petroleum Co.'s No. 4 C. Jones, 330 ft. from N and W lines of lease, G. W. Hooper Sur. ..... Location.

J. H. Massie et al's No. 5 Molly Finn, 660 ft. N of No. 4 and center of E and W lines of lease, H. Edwards Sur. ..... Rig up.

McGee et al's No. 2 M. O. Sheppard, offset to Showers & Moncrief's No. 1 Sheppard, G. R. Rains Sur. .... Set surface csg.

J. C. Means' No. 4 W. D. Luce, SW offset to Blue Star's No. 3-G, E. L. Walker Sur. ..... Rig up.

Jew Miller's No. 1 Andrews, 285 ft. E and 185 ft. N of Shell's J. A. Knowles' No. 2, W. F. Hyde Sur. .... Derrick.

Mullendore & Berry's No. 2 Barnswell, N offset to No. 1 Bramley, P. McAnnelly Sur. ..... Drlg. 1,500 ft.

National Securities Co.'s No. 2 J. A. Knowles, 200 ft. N of No. 1, M. V. Winkle Sur. ..... Drlg. 2,930 ft.

B. F. Phillips et al's No. 1 Church Lot, center of 15-ac. lease, D. Sanches Sur. ..... Drlg. 1,221 ft.

Quad Corp.'s No. 1 F. Duncan, 75 ft. SW of Blue Star's No. 6-A Sabine River, G. F. Penn Sur. ..... Waiting on cmt. to set; T.D. 3,547 ft.

Rajo Oil Co.'s No. 2 Barrett, 378 ft. from N line and 330 ft. from W line of lease, B. W. Witcher Sur. .. Rig up.

Ray Drilling Co.'s No. 5 L. H. Tubbs, 320 ft. from E line of lease, D. Sanches Sur. ..... Set surface csg.

Rhoades Drilling Co.'s No. 3 Sabine River (Tract No. 7), 2,310 ft. from E line and 2,390 ft. from W line ..... Waiting on cmt. to set; T.D. 3,457 ft.

Stroube & Stroube's No. 2 J. R. Bealle, 185 ft. from E line and 705 ft. S of No. 2, M. V. Winkle Sur. .... Drlg. 2,300 ft.

Sun Oil Co.'s No. 1 A. G. Morton, 1,300 ft. S of NW cor. and 396 ft. E of W line of lease, S. Baggett Sur. ..... Waiting on cmt. to set; T.D. 3,496 ft.

Sun Oil Co.'s No. 2 A. G. North, 318 ft. from W line of lease and 551 ft. from No. 1, S. Baggett Sur. .... Derrick.

L. W. Tarkington et al's No. 1 B. Robinson, 150 ft. from N and W lines of 68-ac. lease (old Atlantic & Pacific lease), S. S. Davis Sur. ..... Running csg.; T.D. 3,511 ft.

W. C. Turnbow's No. 2 McKinley, 125 ft. N and 420 ft. E of NE cor. of Yount Lee's Harley lease, D. Sanches Sur. ..... Derrick.

Universal Oil & Gas Co.'s No. 2 Adkins, 750 ft. S of No. 1, D. Dainwood Sur. ..... Drlg. 3,050 ft.

Y Oil Co.'s No. 2 A. M. Kinsel, 330 ft. from E line and center of N and S lines of lease, H. Kirk Sur. .. Testing; T.D. 3,661 ft.

Weaver-Crim's No. 5 Peterson, due S offset to Shell's No. 26 Watson, J. S. Carrithers Sur. ..... Drlg. 2,875 ft.

### HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. ..... T.D. 3,520 ft.

Dr. J. T. Kennon et al's No. 1 Rowe & Baker, 1,320 ft. from N line and 150 ft. from W line of survey and tract, Josiah T. Childress Sur. ..... S.D. 924 ft.

H. H. Meyer's No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. ..... S.D. 3,748 ft.

### HILL COUNTY

T. J. Spikes' No. 1 M. H. Davis, 150 ft. from S and E lines of 55-ac. tract, H. R. Alexander Sur. ..... S.D. 1,523 ft.

### HOPKINS COUNTY

Burgess and Sinson's No. 1 First Natl. Bank, 470 ft. N and W of SE cor. D. Buie Sur., but located in the H.E.P.&P.R.R. Sur. ..... S.D. 2,100 ft.

### HUNT COUNTY

A. Kelsey et al's No. 1 W. R. Berry, 450 ft. from S line and 300 ft. from E line of 139-ac. tract, J. Roads Sur. ..... Location.

### KAUFMAN COUNTY

Elsy-Bentley-Brewer et al's No. 1 J. B. Hunter, 300 ft. from S line and 150 ft. from SE line of 500-ac. tract, 4 miles S of Terrell, R. Bowell Sur. ..... Derrick.

### LAMAR COUNTY

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... Rig up; T.D. 2,446 ft.

### LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... S.D. 2,170 ft.

Shell-Penn & Black's No. 1 W. M. Phillips ..... S.D. 6,060 ft.

### LIMESTONE COUNTY

Miller Drilling Co. and Joiner's No. 1 J. A. Stephenson, 460 ft. from S line and 300 ft. from E line of lease, one-fourth mile SE of Kosse, Charles Welch Sur. .... S.D. 3,140 ft.

### MORRIS COUNTY

Grover Hart's No. 1 Walcott and Lott, 350 ft. from N line and 330 ft. from E line of survey, 3 miles S of Carson, R. A. Russell Sur. ..... S.D. 1,896 ft.

Joiner & Harris Drilling Co.'s No. 1 Clayton Brown, 1,625 ft. N. of most easterly SW cor. of survey, William M. Coffey Sur. ..... S.D. 1,550 ft.

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65-5-ac. tract, J. D. Nelson Sur. ..... S.D. 3,679 ft.

### RED RIVER COUNTY

Ajo Oil Co.'s No. 1 Nickels & Daniels, center of S 780 acres of 1,804-ac. tract, 8 miles N of English, Hugh B. Shaw Sur. ..... Location.

Concord Oil Co.'s No. 1 J. R. Dallahunty, 500 ft. from N of Isaac Moore Sur. and 300 ft. E of E line of Robert Glass Sur. ..... S.D. 2,527 ft.

L. G. Priest's No. 1 R. W. Peck, 900 ft. N and 500 ft. S of southerly SE cor. of 220-ac. tract, A. Wagley Sur. ..... S.D. 1,302 ft.

### ROCKWALL COUNTY

Bucanner Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 120 ft.

### RUSK COUNTY

G. S. Anderson's No. 5 Frederick, 200 ft. from S line of lease and midway between Nos. 2 and 3 and N offset to Lion's No. 2 Jobe, Juan Ximenes Sur. .. Derrick.

Arrow Drlg. Co.'s No. 1 L&G.N.R.R., W. R. Cooke Sur... Drlg. 2,200 ft.

Big Indian Oil Co.'s No. 1 Joe Lee, 172 ft. from S line and 990 ft. from W line of 24-ac. lease, Peter Tipps Sur. ..... Swabbed through tubing showed some salt water; S.D. 3,646 ft.

Bodine et al's No. 1 G. W. Cooper, 1,760 ft. N and 330 ft. E of SW cor. of Ximenes Sur. ..... Prepare for drill stem test; T.D. 3,642 ft.

T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... S.D. 3,812 ft.

Cranfill & Reynolds' No. 1 W. J. Weatherby, 1,400 ft. from E line and 7,200 ft. from S line of survey, Wade J. Walters Sur. ..... Drlg. 3,230 ft.

Fair & Thompson's No. 2 Bradford, 150 ft. from N and E lines of E 16.5-ac. lease, Juan Ximenes Sur. .... Rig up.

Farrell Drilling Co.'s No. 1 W. W. Hammett, 330 ft. from N and E lines of 100-ac. lease, Walker Pettit Sur. ..... S.D. 3,651 ft.; top sand 3,641 ft.; waiting on csg.

Griffin & Barnes' No. 1 fee, 12 ft. from S and W lines of 2-ac. tract, J. B. De Cadena Sur. ..... Rig up.

Gulf Production Co.'s No. 2 W. A. Hindman, 270 ft. S and 133 ft. E from NW cor. of lease, W. W. Simms Sur. ..... Location.

Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.

Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 3,905 ft.

H. B. W. Oil Co.'s No. 2 Redwine, 150 ft. from E line and center of Payne's No. 1 Redwine, Juan Ximenes Sur. ..... Derrick.

Horseshoe Synd.'s No. 2 W. P. Brightwell, NE offset to East Texas' No. 5 A. Livins, R. E. Winn Sur. .... Drlg. 2,660 ft.

Hudson's No. 1 Jeff Phillips, 150 ft. from N line of survey and 640 ft. from W line of 100-ac. tract, 4 miles SE of Minden, Nepomucene Villarea Sur. .... S.D. 1,500 ft.

Humble Oil & Refining Co.'s No. 2 C. H. Hedge, 330 ft. from N and W lines of lease, J. C. Barnett Sur. ..... Derrick.

Humble Oil & Refining Co.'s No. 1 J. D. Taylor, 330 ft. from W line of lease and S offset to No. 1 Hedge ..... Derrick.

Humble Oil & Refining Co.'s No. 2 M. A. Neal, 208 ft. from S line and 108 ft. from W line of 17.67-ac. tract, J. Darley Sur. ..... Drlg. 2,400 ft.

Humble Oil & Refining Co.'s No. 5 V. E. Reid, 749 ft. from N line and 985 ft. from W line of 100-ac. lease, T. J. Martin Sur. ..... Drlg. 115 ft.

Iotex Oil Co.'s No. 2 Tom Beall, W offset to Ward Oil Co.'s No. 3 Beall, P. W. Holmes Sur. ..... Derrick.

J. Jeagen's No. 1 Needham, 330 ft. from N line of lease and 330 ft. from NE and 400 ft. from SE of survey, J. H. Chambers Sur. ..... S.D. 1,414 ft.

Jenkins Bros.' No. 1 Daisy Bradford, 150 ft. from W line of 45-ac. tract, Juan Ximenes Sur. ..... Swabbing; T.D. 3,605 ft.

Kimble & Acre's No. 1 Frederick, 150 ft. from S line and center of E and W lines of 10-ac. lease, Juan Ximenes Sur. ..... Derrick.

Mid-Kansas Oil & Gas Co.'s No. 5 Jim Lunsford, 75 ft. from N line and 893.4 ft. from most easterly E line of lease, J. B. De Cadena Sur. ..... Location.

Olson Bros.' No. 5 J. T. Brown, 200 ft. from N line and 700 ft. from W line of lease, M. J. Pru Sur. .... Derrick.

Orr et al's No. 1 J. C. Hale, 590 ft. E and 330 ft. S of NW cor. of 50-ac. tract, M. V. Pena Sur. ..... S.D. 3,615 ft.

Overton Refining's No. 2 Ma.well, 70 ft. S of J. E. Oliver's No. 1 G. Pool, F. Cordova Sur. ..... S.D. 2,650 ft.

Paulett et al's No. 1 Ed Sparks, 250 ft. from E. 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.

Sandifer et al's No. 1 L. J. Pinkston, S offset to Champlin and Bass' No. 1 Pinkston, J. B. De Cadena Sur. ..... Spudding.

Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,287 ft.

Sibling & Williams' No. 2 Goforth, 407 ft. S of No. 2 and center of E and W lines of lease, J. Lindley Sur. ..... Drlg. 1,100 ft.

Smith and Sikes' No. 2 W. H. Frederick, 150 ft. from S and E lines of 10-ac. lease, Juan Ximenes Sur. .... Waiting on standard rig; T.D. 3,485 ft.

Snyder et al's No. 2 Stewart, 174 ft. NW of No. 1 and 190 ft. SE of C. L. Archer's No. 1 J. H. Stewart, John Womack Sur. ..... Derrick.

Stanolind Oil & Gas Co.'s No. 1 Bettie Coleman, 330 ft. from S and W lines of 320-ac. lease, James Burke Sur. ..... Testing; T.D. 3,625 ft.; top sand 3,597 ft.

Stanolind Oil & Gas Co.'s No. 2 Bettie Coleman, 1,984 ft. from S line and 330 ft. from W line of lease, J. Burke Sur. ..... Rig up.

Sun Oil Co.'s No. 5 R. J. Hendon, 330 ft. from N and E lines of 120-ac. lease, Juan Ximenes Sur. ..... Spudding.

Trico Oil Co.'s No. 1 D. Bradford, 200 ft. N of highway and 150 ft. W of most westerly creek, Juan Ximenes Sur. ..... Derrick.

Sam K. Vierson's No. 2 Andy Givens, S offset to West Florida's No. 1 Andy Givens, R. W. Smith Sur. .... Drlg. 2,235 ft.

Ward Oil Co.'s No. 6 Giles, 150 ft. from E line and center of N and S line of 40-ac. lease, M. J. Pru Sur. ..... Bldg. derrick.

### SMITH COUNTY

Humble Oil & Refining Co.'s No. 8 M. C. Thompson, 330 ft. from S line and 1,175 ft. from W line of lease, Isaac Moore Sur. ..... Set surface csg.

McCullough Oil Co.'s No. 2 Church, 100 ft. from S line and center of E and W lines of lease, J. Jordan Sur. ..... Top sand 3,823 ft.; T.D. 3,825 ft.

McRabie et al's No. 1 C. P. Hamilton, 320 ft. from S and E lines of 255-ac. tract, Jackson Rector Sur. .. Rig up and S.D.

Mundt et al's No. 1 W. E. Murray, 330 ft. from S and E lines of lease, 5 miles SE of Tyler, Marshall Wynn Sur. ..... Fishing; T.D. 4,875 ft.

M. M. Rowan et al's No. 1 Gibbons Mfg. Co., 5,900 ft. from S line and 8,050 ft. from W line of survey .... Moving in rig; T.D. 3,610 ft.

Sinclair Prairie Oil Co.'s No. 6 Patterson, 330 ft. from N and W lines of lease, J. Vargas Sur. ..... Temp. aband.; T.D. 3,753 ft.

### TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,312 ft.

UPSHUR COUNTY

W. C. Bentley's No. 1 Brawley heirs, 630 ft. E and 170 ft. N of NW cor. of Sun's Hargraves lease, M. Mann Sur. ..... Derrick.
Clark & Cowden's No. 3 J. W. Frie, 330 ft. from most easterly E line and center of N and S lines of lease, D. Ferguson Sur. ..... Location.
H. W. Elliott et al's No. 2 W. H. Reid, 330 ft. from N line and E line of 24-ac. lease, M. Mann Sur. .... Derrick.
F. A. Fuller et al's No. 1 Shattesworth, 330 ft. from S and E lines of W 80 acres of 100-ac. tract, James Dunn Sur. ..... Drlg. 2,330 ft.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1½ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,710 ft.
Lynch and McQuing's No. 1 L. T. Mackey, 330 ft. from S line of road and 230 ft. from E line of road, Sarah Harrell Sur. ..... Prepare to deepen; T.D. 3,711 ft.
George Pace et al's No. 1 D. C. Shelton, N offset to C. L. Brown's No. 1 D. C. Shelton, William King Sur. ..... Derrick.
Taubel & Lyons' No. 1 W. H. Duffy, 330 ft. from N and E lines of NW 50-ac. tract, Starr Sur. ..... Coring 3,606 ft.
Travis & Weir's No. 1 L. P. League, 330 ft. from N line and 330 ft. from W line of N 18 acres of L. P. League Sur. ..... Derrick.
Wadley and Evans' No. 1 W. S. Jones, 330 ft. from S and E lines of 100-ac. lease, James M. Dunn Sur. ... T.D. 3,690 ft.; S.D.
Wadley & Lyons' No. 1 Hall, 150 ft. out of NW cor. of H. E. Hall 14-ac. tract, William McKey Sur. .... Temp. abnd. 3,784 ft.
Waggoner and McConnell's No. 3 Williams, 330 ft. from E line and center of N and S lines of 22-ac. lease, McKinley & Williams Sur. ..... Rig up.
J. E. Werby's No. 3 Read, 330 ft. from S line of lease and 490 ft. W of No. 1 T. Hopkins Sur. ..... Fishing; T.D. 2,871 ft.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 235-ac. tract, 3½ miles S of Canton, M. J. De Cadena Sur. ..... S.D. 3,355 ft.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 3,300 ft.
Killum & Chisum's No. 1 N. E. Clark, 165 ft. out of most westerly NW cor. of tract, 3 miles S of Van, Jackson Thomas Sur. ..... Temp. abnd. 3,036 ft.
Killum & Chisum's No. 1 J. J. Goode, 150 ft. from N line and 375 ft. from E line of lease, 5 miles SW of Van, David Rose Sur. ..... Derrick.
Lyman et al's No. 1 J. C. Stewart, 150 ft. from N line and 650 ft. from W line of 90-ac. tract, A. McPhail Sur. ..... T.D. 2,731 ft.
Peden-Olson's No. 1 W. S. Brannon, 205 ft. from N and 150 ft. from W lines of 45-ac. tract, 2½ miles N of John Goodman Sur. ..... Drlg. 810 ft.
Pure Oil Co.'s No. 4 B. W. Russell, 150 ft. S of N line and 225 ft. W of E line of 30-ac. tract, David Rose Sur. ..... Coring 2,938 ft.
Pure Oil Co.'s No. 5 L. A. Smith, 250 ft. S of N line and 250 ft. E of W line of lease in John Walling Sur. ..... Location.
A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. ..... S.D. 2,942 ft.
Roy Stumpff's No. 1 M. I. Riggs, 169 ft. from E line and 250 ft. from S line of tract No. 2 and 330 ft. from E line of lease, 4 miles NE of Van, William Daniel Sur. ..... Rig up and S.D.
H. C. Teague et al's No. 1 C. W. Morris, 1,000 ft. from N line and 300 ft. from E line of 160-ac. tract, 5 miles SE of Ben Wheeler, C. L. Morrison Sur. .... Cleaning out; T.D. 3,097 ft.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.
C. O. Weir's No. 1 W. B. Tunnell, 150 ft. from N and W lines of lease, A. H. Wiley Sur. ..... T.D. 3,003 ft.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur..... S.D. 3,846 ft.
Hull & Short's No. 1 T. H. Peterson, 600 ft. from S line and 200 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. ..... T.D. 2,810 ft.
Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ..... S.D. 3,840 ft.
Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. ..... Drlg. 4,375 ft.

## Wildcat Operations in West Texas

(Continued from Page 35)

Phillips Pet. Co.'s No. 2 Baker, 338 ft. from N and 2,305 ft. from E, Sec. 21, Blk. 33 ..... T.D. 2,080 ft.; csg. reamed to bottom.

HOWARD COUNTY

F.H.E. Oil Co.'s No. 1 Dodge, 330 ft. from N and E, Sec. 15, Blk. 31, Twp. 1s, T.&P. Sur. ..... Drlg. 1,536 ft.
Harrison et al's No. 3 Denman, 2,310 ft. from N and 330 ft. from E, Sec. 10, Blk. 30 ..... T.D. 2,858 ft.; putting on pump.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ..... T.D. 1,560 ft.
Mid-Continent Oil & Gas Co.'s No. 1 Denman, 990 ft. from S and 330 ft. from E, Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ..... T.D. 2,813 ft; putting on pump.
Sinclair Prairie Oil Co.'s No. 4 Dodge, 960 ft. from S and 330 ft. from W, Sec. 11, Blk. 30, Twp. 2s, T.&P. Sur. ..... Drlg. 1,627 ft.
Southern Oil Corp.'s No. 1 Williams, 430 ft. from N and 330 ft. from W of S 122 acres of W half Sec. 42, Blk. 30, Twp. 1s, T.&P. Sur. ..... Rigging up.

HUDSPETH COUNTY

Pattilo-Welsh's No. 1 Briggs ..... S.D. 1,135 ft.; may plug.

IRION COUNTY

Bristow et al's No. 2 Nutt, 2,650 ft. N, 1,000 ft. W, Sec. 6, Gonzales County School Lands Sur. ..... Drlg. 322 ft.
Straughn et al's No. 1 Kaiser, 1,920 ft. from N and 1,320 ft. from W, Sec. 69, H. Cooper Sur. ..... Drlg. 809 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 42.4-ac. tract in G. Martinez Sur. ..... S.D. 1,005 ft.; temp. abnd.
Condor Pet. Co.'s No. 1 Holt, 1,900 ft. from S and 1,800 ft. from W, Sec. 4, Blk. 20, T.&P. Sur. ..... Location.
Croft et al's No. 2 Swann, 4,350 ft. from S and 1,700 ft. from E. I. Miley Sur. No. 230 ..... T.D. 2,550 ft.; treating with acid.
Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur. ..... Rig.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... T.D. 2,290 ft.; trying to mud 8-in. csg.
Smart & Reynold's No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3... S.D. 1,490 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... S.D. 2,020 ft.
Southern Oil Co.'s No. 1 Swann, 1,000 ft. from E and 900 ft. from S. of I. Miley Sur. ..... Spudded and S.D.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 3, O.A.L. Sur. ..... Location.

LOVING COUNTY

A. & M. Pet. Corp.'s No. 1 Wheat, 2,310 ft. SW, 990 ft. SE, Sec. 71, Blk. 1, W.&N.W. Sur. ..... Cellar.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ..... T.D. 4,373 ft.; swabbing and cleaning out.
Eppenauer Drlg. Co.'s No. 1-A Victor, 330 ft. from SW and 338 ft. from SE of NW of N half Sec. 4, Blk. 2, W.&N.W. Sur. ..... Material on ground.
Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Shut down.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 84, Blk. 1, W.&N.W. Sur.. Shut down.
Lewis & Siegel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur... S.D. 2,230 ft.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... S.D. 4,007 ft.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... T.D. 4,050 ft.; straightening crooked hole.

PECOS COUNTY

Cardinal Oil Co.'s No. 3-G Tippett, 660 ft. from S and 330 ft. from E of No. 2 Tippett, Sec. 61, Blk. 194, G.C.&S.F. Sur. ..... T.D. 302 ft.
Cardinal Oil Co.'s No. 16 E. Tippett, 5,200 ft. from S and 150 ft. from W of E half of W half Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... Location.
Cooper et al's No. 1 Perry, 1,980 ft. N and W, Sec. 15, Blk. C-4, G.C.&S.F. Sur. ..... S.D. 802 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.
Massey's No. 1 Iowa Realty Trust, 150 ft. from NE and 1,483 ft. from NW, Sec. 31, Blk. 10, H.&G.N. Sur. .... S.D. 425 ft.
Messinger et al's No. 1 Jones, 1,200 ft. from NW, 1,200 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur. ..... S.D. 1,000 ft.
Stanolind Oil & Gas Co. et al's No. 2 Tippett, 5,300 ft. from S and 150 ft. from E of W half of W half, Sec. 40 ..... T.D. 485 ft.; cmtd. csg. 477 ft.
Winfield et al's No. 1 Eaton, 1,170 ft. from NE and 2,490 ft. from SE, Sec. 35, Blk. 3, H.&T.C. Sur. ..... S.D. 940 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University ..... S.D. 9,562 ft.
Big Lake Oil Co.'s No. 8-C University, 710 ft. from S and 2,410 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 7,245 ft.
Big Lake Oil Co.'s No. 9-C University, 2,410 ft. from N and 765 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 3,760 ft.
Big Lake Oil Co.'s No. 181 University, 1,700 ft. from S and 2,000 ft. from W, Sec. 10, Blk. 2 ..... S.D. 2,800 ft.
Continental Oil Co.'s No. 6-B University, 765 ft. from N and 1,980 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 6,837 ft.
Continental Oil Co.'s No. 7-B University, 1,900 ft. from N and 650 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 1,952 ft.
Continental Oil Co.'s No. 8-B University, 1,200 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 2,846 ft.
J. P. Williams et al's No. 1 Scott, 1,650 ft. from N and 330 ft. from W, Sec. 179, Blk. 1, T.&P. Sur. ..... Spudded and S.D.

REEVES COUNTY

Cordova Union Oil Co. et al's No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassell's Sur. ..... S.D. 1,730 ft.
McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur.... S.D. 2,025 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 2,417-20 ft.; S.D. 3,600 ft.
John Castor's No. 1 Hall, 330 ft. from S and W, Sec. 149, E.T.R.R. Sur. ..... Spudded.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.; fishing.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... Drlg. 5,891 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,320 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... S.D. 5,100 ft.
W. S. Guthrie's No. 1 Clarkson, 1,320 ft. from S and W, Sec. 242, Blk. 97, H.&T.C. Sur. ..... Drlg. 1,843 ft.
Heinzleman et al's No. 1 Hood, 436 ft. from N and 489 ft. from E, Sec. 87, Blk. 3, H.&T.C. Sur. ..... S.D. 990 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,992 ft.

STERLING COUNTY

Fullick & Johnson's No. 1 Davis, 990 ft. from S and 660 ft. from E, Sec. 7, Blk. 12, S.P. Sur. ..... Location.

TAYLOR COUNTY

Urban's No. 1 Blair, 1,500 ft. from S and 150 ft. from W of NE 198 varas Guadalupe County School Lands, Lot 21 ..... Drlg. 2,073 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 165, Blk. D. M-K-T Sur. ..... S.D. 2,269 ft.
Briggs & McPhee's No. 1 Kerr, 1,800 ft. E and 790 ft. S of NW cor. Sec. 18, Blk. 5-D, M.K.&T. Sur. ..... S.D. 500 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S. Sec. 26, Blk. 161, G.C.&S.F. Sur.. S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 3,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... S.D. 3,525 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNese Sur. ..... S.D. 760 ft.; S.O. and gas 725 ft.
Hancock et al's No. 1 Reed, 330 ft. N and 1,670 ft. W of SW cor. of C. Schoner Sur. but in Mason & Perry Subd. No. 39 ..... Location.
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. .... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Clark-Cooper's No. 1 Lane, 2,310 ft. from N and 990 ft. from E, Sec. 36, Blk. 1, M-K-T Sur. ..... S.D. 2,270 ft.; swabbing and cleaning out.
Gulf Prod. Co.'s No. 102 McElroy, 1,320 ft. from S and W, Sec. 189, Blk. F, C.C.S.D.&R.G.N.G. Sur. ..... Rigged up.
White's No. 1 Lane, 2,310 ft. from S and 990 ft. from E Sec. 36, Blk. 1, M-K-T Sur. ..... S.D. 2,355 ft; plugging.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1, I.&G.N. Sur. ..... S.D. 400 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... S.D. 6,730 ft.

WARD COUNTY

Abell Bros.' No. 2 Sloan, 990 ft. from NE and NW, Sec. 24, Blk. 5, H.&T.C. Sur. ..... Cellar.
Abell Bros.' No. 1 Hayslett, 1,650 ft. from NW and 1,320 ft. from SW, Sec. 3, Blk. 5, H.&T.C. Sur. ..... S.D. 2,527 ft.

Atlantic Oil Prod. Co.'s No. 1 University, 330 ft. S and E, Sec. 3, Blk. 16 ..... Fishing 2,448 ft.
Atlantic Oil Prod. Co.'s No. 1 Blank-Camp, 1,320 ft. from NW and SW Sec. 14, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,525 ft.
Atlantic Oil Prod. Co.'s No. 1 Jones, 330 ft. from SW and 1,650 ft. from SE, Sec. 26, Blk. B-29, P.S.L. Sur... S.D. 2,067 ft.
Barnsdall Oil Co.'s No. 5 Henry, 1,650 ft. from NE and 330 ft. from SE, Sec. 24, Blk. B-29, P.S.L. Sur. ..... Location.
Bentley et al's No. 1 Carson, 1,650 ft. from NE and SE Sec. 26, Blk. 5, H.&T.C. Sur. ..... T.D. 2,220 ft.; prod. 30 bbls. day.
Bradford's No. 1 Carson, 1,650 ft. from SE and 990 ft. from NE Sec. 26 ..... Running 8¼-in. csg.
Bradford's No. 1 Beatty, 1,650 ft. from NW and 330 ft. from SW, Sec. 3, Blk. 24, H.&T.C. Sur. ..... Location.
Bundy et al's No. 1 Bennett, 2,310 ft. from NW and SW Sec. 16, Blk. 34, H.&T.C. Sur. ..... T.D. 2,598 ft.; 2,200 ft. fluid in hole.
Eastland Oil Co. et al's No. 1 Grimes, 445 ft. from NE and 1,320 ft. from SE Sec. 14, Blk. 34, H.&T.C. Sur... T.D. 2,480 ft.; flowing 17 bbls. per day.
Eastland Oil Co.'s No. 2 Grimes, 495 ft. from NE and 440 ft. from SE, Sec. 14, Blk. 34, H.&T.C. Sur. ..... Location.
Eastland Oil Co.'s No. 3 Weiss, 954 ft. from NW and 284 ft. from NE of Sec. 4, Blk. 34 ..... S.D. 2,385 ft.; est. 150 bbls. of oil per day.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
Eppenauer Drlg. Co.'s No. 1 University, 330 ft. from N and 440 ft. from E of S half of Blk. 16 ..... Material on ground.
Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Cellar.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 13, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft.
Gulf Prod. Co.'s No. 14 Hutchings, 330 ft. from N and W of Sec. 9, Blk. O ..... S.D. 2,668 ft.
Gulf Prod. Co.'s No. 15 Hutchings, 1,932 ft. from S and 990 ft. from W, Sec. 5, Blk. F ..... Drlg. 2,635 ft.
Gulf Prod. Co.'s No. 23 O'Brien, 330 ft. from N and 990 ft. from E Sec. 18, Blk. F ..... Shut in 2,773 ft.; flowed and swabbed 112 bbls. while deepening.
Gulf Prod. Co.'s No. 26 O'Brien, 3,347 ft. N, 330 ft. E. Sec. 16, Blk. F ..... Drlg. 1,785 ft.
Kregie et al's No. 1 Weasler, 3,063 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... S.D. 2,000 ft; plugged back to 1,452 ft; fishing.
Magnolia Pet. Co.'s No. 1 Brillhart, 2,310 ft. from NW and SW, Sec. 13, Blk. 34, H.&T.C. Sur. ..... Fishing 1,835 ft.
Maxwell's No. 1 Smith, 330 ft. from NW and SW, Sec. 34, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,500 ft.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,632 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 2,720 ft.; plugging.
Penn Oil Co.'s No. 1 Hardage-Wilson, 320 ft. from NE and SE Sec. 11, Blk. 34, H.&T.C. Sur. ..... Fishing 2,465 ft.
Prince Bros.' No. 2 Hall-Roberts, 1,470 ft. from NE and 2,200 ft. from NW, Sec. 14, Blk. 34, H.&T.C. Sur. .... Rigging up.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... Drlg. 4,081 ft.
Rizford-Fuglarr's No. 1 London, 660 ft. NW, 330 ft. NE E cor. Sec. 10, Blk. 32, H.&T.C. Sur., but in Sec. 3 ..... S.D. 2,291 ft.
Rowan & Nichols' No. 1 Street, 990 ft. from SE and 330 ft. from NE, Sec. 17, Blk. 34, H.&T.C. Sur. ..... Derrick.
Skelly Oil Co.'s No. 1 Brillhart, 2,310 ft. from NW and NE, Sec. 12, Blk. 34, H.&T.C. Sur. ..... S.D. 2,480 ft.; 3,000,000 ft. gas.
Southern Oil Co.'s No. 1 Sloan, 1,650 ft. from NE and 330 ft. from NW, Sec. 24, Blk. 5, H.&T.C. Sur. ..... S.D. 840 ft.
Stanolind Oil & Gas Co.'s No. 1 Whitlock, 495 ft. NE, 2,300 ft. SE, Sec. 14, Blk. 34, H.&T.C. Sur. ..... T.D. 2,515 ft.; 100 ft. oil and 90 ft. water in 16 hrs.
Sturm et al's No. 4 Jones, 2,310 ft. from SW and 990 ft. from SE Sec. 25, Blk. B-29, P.S.L. Sur. ..... To test 2,546 ft.
T. P. Coal & Oil Co.'s No. 7 James, 1,320 ft. from SW and SE, Sec. 5, Blk. 34, H.&T.C. Sur. ..... S.D. 1,625 ft.
Thompson's No. 1 Johnson, 2,310 ft. from SW and 330 ft. from NW, Sec. 9, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,245 ft.
Zech et al's No. 1 Brillhart, 2,310 ft. from SE and SW, Sec. 12, Blk. 34, H.&T.C. Sur. ..... T.D. 3,512 ft.; flowing 25 bbls. day.

**WINKLER COUNTY**

Colonial Oil Co.'s No. 1 State vacancy, 330 ft. E and 103 ft. N of NW cor. Sec. 2, Blk. 77, P.S.L. Sur. ..... To skid rig after pipe parted.
Richardson et al's No. 1-B Scarborough, 990 ft. from S and 1,980 ft. from E, Sec. 18, Blk. 74, P.S.L. Sur. .... S.D. 2,550 ft.
Richardson et al's No. 2 Scarborough, 1,320 ft. from N and 660 ft. from E, Sec. 1, Blk. 77, P.S.L. Sur. ..... S.D. 2,230 ft.; est. 150 bbls. per day.

## Wildcat Operations in Texas Panhandle

**Week Ending January 23**

Company, well, farm name, section and block— Remarks:

**CARSON COUNTY**

Gulf Prod. Co.'s No. 6 Cooper, 330 ft. from N and W SW, Sec. 4, Blk. 9, I.&G.N. Sur. ..... S.D. 3,075 ft.; T.P. 3,035 ft.; to test.
Panhandle Rfg. Co.'s No. 1 Kirby, 1,320 ft. N and W, Sec. 183, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,030 ft.
Sinclair Prairie Oil Co.'s No. 1 Cooper, 330 ft. from S and W, Sec. 4, Blk. 9, I.&G.N. Sur. ..... T.D. 3,115 ft; C.O.
Texas Interstate P. L. Co.'s No. 1 Burnett, 1,333 ft. N, 2,675 ft. E of N¼ Sec. 97, Blk. 5, I.&G.N. Sur. ..... Drlg. 722 ft.
Union Pet. Co.'s No. 3 Cooper, 330 ft. N, 310 ft. E SE. Sec. 5, Blk. 9, I.&G.N. Sur. ..... Cellar.

**CHILDRESS COUNTY**

Robertson's No. 1 Biddy, center S 26½ acres of N, Laughlin Sur. Blk. T ..... Rig.

**COLLINGSWORTH COUNTY**

Cochran Bros.' No. 1 Atkinson, 660 ft. from N and E, Sec. 26, Blk. 21, H.&G.N. Sur. ..... S.D. 300 ft.
Kates et al's No. 1 Hickman, center NE, Sec. 45, Blk. 10, H.&G.N. Sur. ..... S.D. 2,275 ft.
Kates et al's No. 1 Bell, 300 ft. from N, 2,310 ft. from W, Sec. 31, Blk. 102, H.&G.N. Sur. ..... S.D. 2,702 ft.

**COTTLE COUNTY**

Darby Pet. Co. et al's No. 1 Puersil, 330 ft. from N, 1,320 ft. from E. Sec. 46, Blk. B, John H. Stevens Sur. ..... Fishing 4,717 ft.

**DEAF SMITH COUNTY**

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 19-3n-2e ..... S.D. 1,240 ft.

**GRAY COUNTY**

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.
Baldridge et al's No. 1 Melton, 330 ft. from NE E half NE, Sec. 95, Blk. B-2, H.&G.N. Sur. ..... S.D. 3,075 ft.; T.P. 3,013 ft.; 40 bbls.; to make 5-day test.
Baldridge et al's No. 1 Catlin, 330 ft. S and E of E 80 of 158-ac. tract, Sec. 87, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,422 ft.
Baldridge O. Co.'s No. 1-B Melton, 330 ft. from N and E of SW, Sec. 95, Blk. B-2, H.&G.N. Sur. ..... S.D. 1,815 ft.
Bell O. & G. Co.'s No. 2 Tedesco Webb, 330 ft. S and W, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Drlg. 2,465 ft.
Boyce et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... S.D. 2,554 ft.; shot. 50 qts.; no results.
Gerdan Burch's No. 1 Laugham, 990 ft. S, 330 ft. E. Sec. 1, W½ NE, Sec. 1, Blk. B-2, H.&G.N. Sur. ..... Set 10-in. 2,090 ft.
Cantone Oil Co.'s No. 2 Morse, 330 ft. from N, 330 ft. from E line, Blk. 9-A, Sec. 16, H.&G.N. Sur. ..... Location.
Christy's No. 1 Gethings, 330 ft. from N and E, Sec. 13, Blk. A-9, H.&G.N. Sur. ..... S.D. 1,760 ft.
Sam Danner's No. 1 Cobb, 330 ft. S and W NE, Sec. 165, Blk. 3, I.&G.N. Sur. ..... S.D. 550 ft.
Dolomite Prod. Co.'s No. 1 Sailor, 330 ft. N and E, Sec. 111, Blk. 3, I.&G.N. Sur. ..... U.R. csg. 915 ft.
Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Rig.
Gray County Prod. Co.'s No. 1 Huselby, 330 ft. from S and W, E½ NW, Sec. 55, Blk. 25, H.&G.N. Sur. ..... Drlg. 2,000 ft.
Gulf Oil Corp.'s No. 2 Catlin, 330 ft. S and W NW cor. SW, Sec. 40, but in Sec. 57, Blk. 3, I.&G.N. Sur. ..... T.P. 3,042 ft; T.D. 3,156 ft; swbd. 185 bbls. in 4½ hrs. after shot.
R. H. Locke's No. 1 McKnight, 1,320 ft. N and W, Sec. 175, Blk. B-2, H.&G.N. Sur. ..... Spudded.
Mazda-Shell Pet. Corp.'s No. 2 Combs-Worley, 330 ft. from N and W NE, Sec. 35, Blk. 3, I.&G.N. Sur. ..... Flowed 27 bbls. per hr. with 12,000,000 ft. of gas; drlg. 3,050 ft.
Mazda-Shell's No. 4 Coombs-Worley, 990 ft. from N line 330 ft. from E line, Sec. 35, Blk. 3, I.&G.N. Sur... Rig.
Mid-Kansas O. & G. Co.'s No. 1 Gethings, 330 ft. S, 1,650 ft. W S½ S½, Sec. 13, Blk. A-19, H.&G.N. Sur... T.P. 2,586 ft; 2 bbls. daily; T.D. 2,780 ft; estimated 60-bbl. well.
Ochiltree et al's No. 1 Hughey, 350 ft. S, 330 ft. E E half SE, Sec. 129, Blk. 3, I.&G.N. Sur. ..... Standardizing 2,740 ft.
Parton & Holt's No. 2 Morse, 330 ft. from W, 350 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... S.D. 2,635 ft; to shoot.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... S.D. 2,532 ft.; flowed 8 bbls. per day.
Peterson & Holt's No. 1 Gething, 330 ft. from S and W of N½ SE Sec. 13, Blk. 9-A, H.&G.N. Sur. ..... Cellar.
Phillips Pet. Co.'s No. 1 Davidson, 330 ft. N and W, Sec. 86, Blk. B-2, H.&G.N. Sur. ..... Drlg. 518 ft.
Pulse-Shell's No. 1 Brown, 290 ft. from N, 250 ft. from E of NW, Sec. 128, Blk. 3, I.&G.N. Sur. ..... T.D. 3,263 ft.; T.P. 3,215 ft.; running rods and tubing.
Quicksand Oil Co.'s No. 2 Chapman, 165 ft. N, 775 ft. from E of W 60 ac. of N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Drlg. 2,527 ft.
Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,275 ft. and shoot.
Sinclair Prairie Oil Co.'s No. 1-E Combs-Worley, 330 ft. from S and E, Sec. 34, Blk. 3, I.&G.N. Sur. ..... Location.
Skelly Oil Co.'s No. 1 Gething, 990 ft. from S and W of Sec. 45, Blk. 9-A, H.&G.N. Sur. ..... U.R. csg. 340 ft.
Skelly Oil Co.'s No. 3-A South Jackson, 330 ft. N, 1,050 ft. E, Sec. 88, Blk. B-2, H.&G.N. Sur. ..... Drlg. 1,477 ft.
Tedesco-Bell O. & G. Co.'s No. 4 Morse, 990 ft. N and W SE, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Rig.
Texoma Nat. Gas Co.'s No. 1-G Abersold, 2,632 ft. N, 2,640 ft. W, Sec. 130, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,070 ft.
The Texas Co.'s No. 2 Barrett, 1,022 ft. N, 300 ft. E NW, Sec. 130, Blk. 3, I.&G.N. Sur. ..... T.D. 3,127 ft; T.P. 3,118 ft; running tubing.
The Texas Co.'s No. 1 Gethings, 330 ft. from S line, 330 ft. from W line, S½ Sec. 47, Blk. 9-A, H.&G.N. Sur... Drlg. 2,168 ft.
Paul Tharp's No. 1 Short, 330 ft. from N and W of Sec. 2, Blk. 1, H.&G.N. Sur. ..... Drlg. 828 ft.
Sam Travis' No. 1 Back, 330 ft. S and E E half NE, Sec. 44, Blk. 25, H.&G.N. Sur. ..... Rig.
Tripplehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur. ..... T.D. 3,154 ft; running rods and tubing.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... T.D. 2,675 ft.; plugged back to 2,285 ft.; to set csg.

**HEMPHILL COUNTY**

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur. ..... S.D. 5,230 ft.

**HUTCHINSON COUNTY**

Alexander's No. 1 Cockrell, 330 ft. N and E of E 80 of S 160, Sec. 3, Blk. M-2, T.C. Sur. ..... Fishing 910 ft.
Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... T.D. 3,080 ft.; est. 5 or 10 bbls.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 44, H.&T.C. Sur..... S.D. 450 ft.
Huber Pet. Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur. ..... S.D. 2,918 ft.
Huber Pet. Co.'s No. 1 Works, 1,342 ft. from S and 1,813 ft. from E, Sec. 7, Blk. Y-2, T.T. Sur..... U.R. 10-in. csg. 1,800 ft.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... T.D. 3,146 ft.
Joe Murphy's No. 1 Watkins, 440 ft. from N and W of N half, Sec. 13, Blk. M-21 ..... Drlg. 2,955 ft; T.P. 2,941 ft.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ..... Shut down.
Stanolind O. & G. Co.'s No. 4-A Ware, 330 ft. S and W NE, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,837 ft.
Steckel Prod. Co.'s No. 2-D Whittenburg, 1,065 ft. from S and W, Sec. 38, Blk. M-22, T.C. Sur. ..... T.D. 3,035 ft.; T.P. 3,000 ft.; to shoot.
Texilvania Oil Co.'s No. 1 Haile, 330 ft. S, 280 ft. W, Sec. 16, Blk. 1, E.L.R.R. Sur. ..... S.D. 690 ft.

**LIPSCOMB COUNTY**

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

**MOORE COUNTY**

Canadian River Gas Co.'s No. 2-A Perkins, 3,250 ft. S of most northerly NE cor, 200 ft. W of E line, Sec. 54, Blk. 47, H.&T.C. Sur. ..... Drlg. 385 ft.
Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... S.D. 2,171 ft.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur. ..... T.D. 3,555 ft; T.P. 3,470 ft; swbd. 318 bbls. in 18 hrs. after shot.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. .... Drlg. 3,779 ft; 200 ft. oil in hole at 3,428 ft.

**MOTLEY COUNTY**

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

**OLDHAM COUNTY**

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. 8, G.C.&S.F. Sur. ..... Sidetrack 8-in. csg. to drill by with rotary.

**ROBERTS COUNTY**

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Pulling csg. to rerun at 4,870 ft.

**WHEELER COUNTY**

Delaney et al's No. 1 Sitter, 330 ft. from S and W of E half NE, Sec. 33, Blk. 24 ..... S.D. 2,333 ft.
Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 2,760 ft.; S.D. for pipe line connection.
Helena O. & G. Co. et al's No. 1 Below, C NE SW, Sec. 50 ..... Material on ground.
B. M. Rhodes' No. 1 Noel, 330 ft. S and E NE, Sec. 54, Blk. 24, H.&G.N. Sur. ..... Material on ground.

# Kansas Crude Oil Purchasers Increase Demand; Mabee Pool Extends Into Harvey County

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

The interesting feature of the week in Kansas was the finding of oil in a test, 1½ miles south of production in the Mabee Pool, in McPherson County, which extends the production into Harvey County. This extension well is estimated from 1,000 to 1,500 bbls. a day.

The daily average production of Kansas for the week ending January 21 shows an increase of approximately 2,400 bbls. daily, the daily average having been 91,900 bbls. Most of this increase is in the Mabee Pool. Increase in the market demand for crude oil has resulted in an increase in the daily allowable for all wells in the Ritz-Canton-Decker Pool, in McPherson County. Two dry holes in the Hollow Pool in Harvey County, completed during the week, partly define the producing area of that pool.

Whether the discovery of oil 1½ miles south of the Mabee Pool is an extension of that pool or a new pool is debatable. The discovery well, Lee, Ross & Reeser's No. 1 Wall, NW cor. SW, Section 4-22-3w, Harvey County, began flowing at 3,507 feet. No gauge was first obtained of the well, as no tankage was available on the lease. It is estimated to be a 1,000-bbl. well. The pay was unexpectedly found as it was logging low compared to producing wells in the Mabee Pool, 1½ miles north.

During the week new nominations were received for the Mabee Pool in McPherson County. They include 300 bbls. a day by the Derby Oil Co. and 300 bbls. a day by the Shell Petroleum Corp. The Shell Petroleum Corp., however, has agreed to take 1,500 bbls. a day to make up the underage for J. E. Mabee, Inc., which will be from the discovery well in the pool.

New potentials for the field will be taken after each well has been produced 60 days on the basis of its original potential. Potentials of the wells now completed in the pool include the Derby Oil Co.'s No. 1 Hamm, 2,794 bbls. and No. 2 Hamm, 2,308 bbls. per day. Both are 24-hour gauges. J. E. Mabee, Inc.'s No. 1 Nickel, 800 bbls. a day; No. 1 Koehn, 250 bbls. a day and No. 1 Klassen, 2,308 bbls.

This field is fast becoming one of the important producing areas in the State. During the week three tests started spudding.

The Lario Oil & Gas Co.'s No. 1 Krehbiel, NW cor. SW, Section 34-21-3w, is the south offset to the most easterly producer in the Mabee Pool, and was spudding with rotary tools. J. E. Mabee, Inc.'s No. 2 Klassen, SE cor. NE SE, Section 19-22-3w, was spudding with rotary tools. The third test is Mid-Kansas Oil & Gas Co.'s No. 2 Schmidt, SW cor. NE NE, Section 33-21-3w, with cable tools.

### Increased Demand in Ritz-Canton

Increase in the demand for crude oil by the White Eagle Oil Corp. and Dickey Oil Co. resulted in an increase in the allowable of the Ritz-Canton-Decker Field in McPherson County. The deep sand producers were increased from 12 per cent to 14 per cent of their potential and the chat wells from 20 per cent to 35 per cent of their potential.

The White Eagle Oil Corp. is now purchasing 6,500 bbls. daily from the Ritz-Canton-Decker Field and the Dickey Oil Co. is purchasing 1,600 bbls. daily. The Philtex Oil Co. is taking 6,000 bbls.; Shell Petroleum Corp., 800 bbls.; Stanolind Crude Oil Purchasing Co., 900 bbls., and the others, 1,750 bbls.

The Stoltenberg Pool, in Ellsworth County, is shut in as the Vickers Petroleum Co. and the Derby Oil Co. have withdrawn as purchasers in that area. These wells were formerly allowed to make 225 bbls. daily. The field was shut in January 19.

Atlantic Oil Producing Co.'s No. 1 well, C NW SE Section 27-21-13w, is a wildcat location 9 miles north of the Richardson Pool in Stafford County.

Roy Ramsey and others' No. 1 on Lots 15 and 16, Block 21, Chase Townsite, Section 32-19-9w, Rice County, is a location. It is one location north of the discovery well on the Chase High School lot, recently completed.

The Texas Company's No. 2 Nathigal, NW cor. SE SW Section 21-21-3w, in the south extension area of the Voshell Pool, in McPherson County, swabbed 46 bbls. of oil an hour for eight hours from the Simpson sand at 3,424-40 feet.

### Showings in Marion

J. F. Farrel and others' No. 1 Williamson, in Section 21-19-4, a wildcat in Marion County, found another showing of gas at 2,362 feet. The first showing was both oil and gas at 2,335 feet. The showing of gas improves the outlook of the well, which is logging high on these formations compared to two other wells drilled in the vicinity. The well was drilling deeper to test the Wilcox sand.

### Commission's Order

The Kansas Public Service Commission issued an order on January 13 to prevent physical waste and underground waste and to enable the commission to order oil to be taken from the prorated areas equitably. The order reads that all nominations made by crude oil purchasers in the prorated areas in Kansas for crude oil shall be made in writing to the state oil umpire before any oil is run by the purchaser and the nominations shall state the amount of crude oil required by the purchasers for refining purposes, or for trade to other companies, and the nominators shall state the prices to be paid at the well in the field. If nominations are not submitted as required they shall be refused and no oil permitted to be run.

### Deep Test in Hollow Pool

The first deep test below the Hunton lime formation in the Hollow Pool, in Harvey County, is to be made by Phillips Petroleum Co.'s No. 2 Warkentine, SW cor. NE SW Section 20-22-3w, in the southeast part of that field. The test found the top of the Hunton lime at 3,480 feet, and after drilling to 3,520 feet, with no oil showing, it was decided to drill the well to the Viola lime and the Wilcox sand formations. The well indicates that the southeast edge of the field has been found and it was the first Hunton dry hole drilled in the producing area of the Hollow Field.

At the close of the year 1932 there were 12 producing wells in the Hollow Field with an estimated potential of 29,000 bbls. daily, according to the field umpire.

W. C. McBride, Inc.'s No. 1 well, NW cor. SE Section 30-22-3w, is the second well in the Hollow Pool to be drilled dry. The Hunton lime was found from 3,541-49 feet, where it found water and is now shut down.

### Protest Lowered Prices

The recently organized Kansas Oil Producers and Landowners Association entered a protest against the latest reductions in the posted prices of crude oil in a resolution which set forth that they had co-operated in all the conservation movements meant to stabilize the industry, but that notwithstanding their numerous sacrifices the desired results have not been obtained. E. B. Shawver, prominent individual producer, is president of the organization.

In western Kansas L. F. Meyers and others' No. 1 Brown, C SW, Section 16-25-34w, Finney County wildcat, was completed for 5,000,000 feet of gas a day from 2,635-2,742 feet. Gas from this well has been piped to the townsite of Garden City, where it is being used for domestic purposes.

At the present time there are approximately 210,000 acres under lease in Finney County. The majority of these leases are held by major oil companies. The holdings include: Atlantic Oil Producing Co., 69,210 acres; Magnolia Petroleum Co., 50,300 acres; National Refining Co., 24,000 acres; Sinclair Prairie Oil Co., 13,700 acres; Phillips Petroleum Co., 12,800 acres; Stanolind Oil & Gas Co., 8,120 acres, and L. F. Meyers and others have 17,300 acres in one block on which the new producer is located.

### Barton County

Sinclair Prairie Oil Co.'s No. 1 Turgeon, C NE NW Section 3-16-12w, was abandoned at 3,479 feet.

### Cowley County

Roth and Farout's No. 2 fee, NE cor. SW SW SE Section 22-32-4, was completed for 1,500,000 feet of gas a day from 2,965-97 feet. Slocum and others' No. 1 Baker, NE cor. NW NE Section 27-32-4 (old well drilled deeper), was abandoned at 3,020 feet.

### Ellsworth County

Gurley Brothers and others' No. 1 Union Pacific, NW cor. SW Section 7-14-7w, was abandoned at 3,601 feet.

### Ellis County

Phillips Petroleum Co.'s No. 1 Kessler, SE cor. Section 32-11-17w, (old well

(Continued on Page 41)

## Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

**BARTON COUNTY**

| Company, farm and location— | Remarks: |
|---|---|
| Vickers Petroleum Co.'s No. 1 Kerr, NW SE Sec. 15-16-12w | Rig. |
| Sinclair Prairie Oil Co.'s No. 1 Turgeon, C NE NW, Sec. 3-16-12w | Drlg. 3,474 ft. |
| Rankin's No. 1 Sooey, C SW NE Sec. 34-18-12w | Drlg. 160 ft. |
| Doherty et al's No. 1 Roesler, SW NE Sec. 11-18-11w | S.D. 1,975 ft. |
| Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w | Set liner 3,530-46 ft.; show oil; S.D. 3,605 ft. |

**COWLEY COUNTY**

| | |
|---|---|
| Roth & Farout's No. 1 Craig, SE cor., Sec. 2-32-3 | T.D. 3,393 ft.; water; abnd. |

**DICKINSON COUNTY**

| | |
|---|---|
| Severs' No. 1 Livingood (O.W.D.D.), SE NW Sec. 13-12-21 | S.D. 4,900 ft. |

**ELLIS COUNTY**

| | |
|---|---|
| Phillips Pet. Co.'s No. 1 Unknown, C SW Sec. 33-11-17w | Location. |

**ELLSWORTH COUNTY**

| | |
|---|---|
| Sinclair Prairie and Olson's No. 1 Brack, C SW SW Sec. 17-14-10w | Spudding. |
| Mid-Kansas Oil & Gas Co.'s No. 1 Kanak, NE SW Sec. 15-16-7w | Drlg. 2,793 ft. |
| Henry et al's No. 1 Arnsman, C SW SW Sec. 10-15-7w | Rig. |
| Sinclair Prairie's No. 1 Unknown, C NE NE Sec. 27-15-8w | T.D. 3,115 ft.; abnd. |
| Buckford's No. 1 Burke, C NE SW Sec. 14-14-9w | S.D. 50 ft. |
| Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW Sec. 7-14-7w | Drlg. 3,517 ft. |
| R. Gear et al's No. 1 Kroboth, SE NW Sec. 12-15-10w | Fishing 3,050 ft. |

**FRANKLIN COUNTY**

| | |
|---|---|
| Judd et al's No. 1 Unknown, C SW NW Sec. 16-16-18 | S.D. 1,210 ft. |

**GRAHAM COUNTY**

| | |
|---|---|
| Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-26w | Drlg. 3,724 ft. |

**HARVEY COUNTY**

| | |
|---|---|
| Phillips Pet. Co.'s No. 1 Weebe, NE SE NE Sec. 30-23-2 | Drlg. 2,555 ft. |

**MARION COUNTY**

| | |
|---|---|
| Farrell et al's No. 1 Williamson, C NW SE Sec. 21-19-4 | Drlg. 2,025 ft. |
| Vernon et al's No. 1 Schmidt, C SW NW Sec. 35-19-1 | Cleaning out 3,215 ft. |

**McPHERSON COUNTY**

| | |
|---|---|
| Lario O. & G. Co.'s No. 1 Wilke, C SE NE Sec. 34-20-4w | Drlg. 1,450 ft. |
| Holcomb & Trummer's No. 1 Waltner, SW NE SE Sec. 19-20-2w | Location abnd. |
| Whan et al's No. 1 Nelson, NW SE Section 18-19-2w | Location. |
| Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w | S.D. 2,858 ft. |
| Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1w | S.D. 1,205 ft. |

**MORTON COUNTY**

| | |
|---|---|
| Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22, 34-43w | T.D. 3,640 ft.; temp. abd. |

**NESS COUNTY**

| | |
|---|---|
| Sinclair Prairie Oil & Gas Co.'s No. 1, C SW SW Sec. 16-19-21w | Drlg. 4,362 ft. |

**NORTON COUNTY**

| | |
|---|---|
| Richards et al's No. 1 Colby, Sec. 17-4-21w | Rig. |

**OSAGE COUNTY**

| | |
|---|---|
| Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15 | S.O. 2,190-2,200 ft.; temp. abnd. |

**PRATT COUNTY**

| | |
|---|---|
| Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w | Drlg. 3,488 ft. |

**RENO COUNTY**

| | |
|---|---|
| Skelly Oil Co.'s No. 1 Cole, C SE NW Sec. 4-26-8w | Drlg. 3,235 ft. |
| T. L. Johnson's No. 1 Crotts, NE NW NE Sec. 27-26-10w | S.D. 50 ft. |

**RICE COUNTY**

| | |
|---|---|
| Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w | Rig. |
| J. Liggett et al's No. 1 Thodel, C NW NW Sec. 11-21-7w | S.D. 50 ft. |

**SALINE COUNTY**

| | |
|---|---|
| Frank Dieter's No. 1 Fulton, SW NW Sec. 14-16-2w | Rig. |

**SEDGWICK COUNTY**

| | |
|---|---|
| Cameron-Great Basin Oil Co.'s No. 1 Landon, C SE NW Sec. 13-28-2 | Top Sil. 3,303 ft.; S.D. 3,531 ft. |

**STEVENS COUNTY**

| | |
|---|---|
| Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w | S.D. 5,521 ft. |

**STAFFORD COUNTY**

| | |
|---|---|
| Stringer et al's No. 1 Swindle, SW NE Sec. 2-25-11w | Spudded; S.D. |

**SUMNER COUNTY**

| | |
|---|---|
| Deal Oil & Gas Co.'s No. 1 Thompkins, SW cor. Sec. 26-33-1 | Machine. |

**WOODSON COUNTY**

| | |
|---|---|
| Spencer et al's No. 1 Weidel, NW cor. Sec. 5-24-15 | S.D. 1,568 ft. |

# Daily Production Off 26,600 Bbls. in Oklahoma; Noble County Results Prompt More Drilling

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

Crude oil production of Oklahoma is estimated at 374,700 bbls. for the week ending January 21, a decline of approximately 26,600 bbls. daily from the previous week. Other developments in the State include the announcement of a wildcat well in Garfield County by the Continental Oil Co. The Mid-Kansas Oil & Gas Co. on February 1 will withdraw as a purchaser of crude oil in the Bristow and Boynton districts. The Wentz Pool, in Noble County, has taken on added importance and additional locations are expected to be announced that will widen the producing area. The most northerly well is expected to start its 10-day potential this week and a pipe line connection has been made to the well. The most southerly well is coring and drilling deeper.

The Lucien Consolidated Community's No. 1 Jerome, C SW SW Section 8-20-2w, Wentz Pool, Noble County, flowed 1,115 bbls. on Saturday, January 21; 1,002 bbls. Sunday, and 1,003 bbls. on Monday, from the sand and shale at 5,174-5,250 feet. The well found the top of the green shale at 5,246 feet. It is expected this well will be drilled deeper before it begins taking a 10-day potential test of production.

The Champlin Refining Co. is excavating for a water pond on its lease in the NE of Section 21-20-2w, and it is believed that a location will be announced on this acreage in a few days. The lease expires in May, 1933. It is located about a mile southeast of the discovery well in Section 17-20-2w.

The Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Kolb, C NE NW Section 33-20-2w, the most southerly well in the Wentz Pool, was swabbed for 12 hours and made 115 bbls. of oil from sand at 4,978-5,032 feet. It will be drilled deeper after finding dolomite at 5,032-39 feet. This well is 3½ miles southeast of the well in Section 8-20-2w.

### Test in Eastern Garfield County

Continental Oil Co. and others' No. 1 Thompson, NW cor. SW SW Section 7-24-4w, is a new wildcat location in eastern Garfield County. The location is near the townsite of Hunter, and will test a structure that has been worked geophysically.

The structure is believed to extend north into Grant County. The test is to be drilled to the Wilcox sand which is believed to be about 5,700 feet deep. All the shallow sands will be cored and tested and should any of these make as much as 200 bbls. a day the well will be completed and another test made to the Wilcox sand, under the terms of the contract. The Continental Oil Co. recently obtained a renewal of the majority of the leases in the block and was obliged to start the well by February 1.

The other companies which have recently renewed their holdings in the area include the Gypsy Oil Co. and Sinclair Prairie Oil Co. The nearest production is the Garber Field in Garfield to the southeast and the Billings Pool to the east in Noble County. The Continental Oil Co. and others' well is located on a block of 1,600 acres.

### Purchaser Withdraws

The Mid-Kansas Oil & Gas Co. announces that after February 1, its transportation unit, the Illinois Pipe Line Co., will cease to be a purchaser of crude oil in the Bristow and Boynton districts, and is advising owners of wells that it is connected to to find another outlet for their crude.

In southern Oklahoma, the producing area east of Comanche has been defined by the finding of a dry hole in the northern part of the field. George Pace's No. 1 D. Watkins, SE cor. NW Section 22-2s-7w, Stephens County, was found to be dry at 2,031 feet and is being abandoned. The well is the north offset to the most northerly producing well in the field.

Two other dry holes were completed in Stephens County last week. C. Becker's No. 1 Wilson, C E half NE SW Section 20-2s-7w, on the east edge of Comanche, abandoned at 1,922 feet, and J. R. Travis' No. 1 S. Jones, NE cor. SE Section 13-1s-8w, a wildcat, abandoned at 2,551 feet.

### In Southern Fields

Two interesting wells are drilling in Caddo County. Denver Producing & Refining Co.'s No. 1 Noe, NW cor. SW SW Section 34-10-10w, near Binger, was drilling at 3,548 feet in shale. It is being drilled with rotary tools. The other test is John B. Nichols and others' No. 1 Rigney, SE cor. NW Section 12-5-9w, in the Cement Field, Caddo County, moving out 5-inch casing to cement top of a sand from 4,311-28 feet.

Two new locations were announced for the Hanbury Pool, in eastern Comanche district. C. M. Becker and others' No. 1 Ritchie, SW cor. Section 19-2-9w, was rigging up tools. H. M. Chamberlain and others' No. 1 Minson, SE cor. NE NW Section 30-2-9w, was preparing to spud.

In the Tatums Field in Carter County, only one well reached the sand during the week. It was the Frank Gouin and others' No. 2 D. C. Burton, NW cor. SW SW Section 30-1s-2w, which has landed casing at 2,416 feet on top of the oil sand. The operators were making preparations to drill into the sand and complete.

The Carter Oil Co.'s No. 3 Robb, SE cor. SW NW Section 19-1s-2w, flowed 445 bbls. the first 24 hours from sand at 1,661-1,870 feet.

### In Greater Seminole

In the Greater Seminole area, the Wood Oil Co.'s No. 1, SW cor. NE NW Section 22-7-5, Seminole County, is a location. This is being drilled after a seismograph survey of the district.

In the Sacred Heart area, of Pottawatomie County, Magnolia Petroleum Co.'s No. 1 Brister, SW cor. NE Section 28-7-4, swabbed 1,080 bbls. of oil in 15 hours from Simpson sand at 4,193-96 feet. It is now shut down taking its proration time.

Hilton Phillips and others' No. 1 Bettis, SE cor. SW Section 21-7-4, was drilling deeper at 4,130 feet after finding a showing of oil in the Viola lime at 4,045-95 feet.

In the West Konawa area in the southeastern part of Pottawatomie County, the Watchorn Oil & Gas Co.'s No. 1 Huffman, NE cor. SE NE Section 30-6-5, found water in the Wilcox sand at a total depth of 3,698 feet and is plugging back to test a showing of oil found in the Hunton lime at 3,180 feet.

### Gas Conservation Orders

The recent Corporation Commission order which requires operators in the Oklahoma City Field to equip oil wells to prevent unnecessary wastage of natural gas is causing the operators to survey the properties and estimate the costs.

The order states that operators shall tube or otherwise equip the oil wells in the Oklahoma City Field so as to prevent unnecessary wastage of gas. The order further states that operators are expected to meter gas produced from oil wells, whether or not such gas is utilized, and particularly that all operators and manufacturers shall meter all gas used, manufactured, consumed or wasted in the so-called gasoline plants, and particularly shall meter all residue, or tail gas dissipated or blown into the air, and report to the commission regularly, as now provided for the reporting of production of gas from gas wells, and a separate report of the amount of all gas dissipated or blown into the air.

This order means that all the 999 wells in the Oklahoma City Field must be equipped with tubing and other gas saving devices and the order states that they have 45 days from January 13 in which to install the equipment.

It is believed that some opposition will be offered and a petition may be filed to ask for a special hearing before the commission. The commission's order was based on evidence given at a series of hearings on oil proration matters during the last two years. In the general investigation, terminated in December, it was stated by a number of operators that enormous amounts of gas have been blown into the air since the discovery of the field.

The commission estimated that the daily wastage of gas in the Oklahoma City Field was 300,000,000 feet a day, while the daily average consumption of the State of Oklahoma is only 117,000,000 feet a day.

On January 27 the Corporation Commission will hear suggestions on the order requiring gas saving and metering devices on all wells in the Oklahoma City Field. Operators have held several hearings to devise means of aiding the commission in enforcing the order.

Hall-Briscoe, Inc., has filed a petition with the commission asking for an adjustment on the potential of its No. 1 Mueller, in Block 9 of the Armourdale Addition of the Oklahoma City Field, and the hearing has been set for January 24.

### Adjusted Allowables

The production of oil that was granted to the Oklahoma City operators under recent orders, for higher and adjusted potentials by the Corporation Commission, is now being curbed under orders of Col. Cicero I. Murray, in charge of military enforcement. The underproduction from these wells will now be produced at a slower rate.

The Capitol Producing & Refining Co.'s No. 1 Jones was given a higher allowable, giving the well an underproduction of 116,000 bbls. The production was restricted to 2,000 bbls. daily for six days in December, and the remainder is now being produced at not to exceed 1,000 bbls. daily.

Morgan Petroleum Co.'s No. 1 Stout was also granted a higher allowable, which gives the well about 55,000 bbls. of underproduced oil. The company is now permitted to produce 1,000 bbls. daily.

It is claimed it would be unwise to produce that much oil in a short time because it would waste a large volume of gas. Under a slow rate of production the gas can be curtailed and much of the energy conserved.

The Corporation Commission granted the Kessler Oil & Gas Co.'s No. 1 Grace, a shutdown well, permission to take its December and January allowables, amounting to about 6,500 bbls. for the two months.

Plains Petroleum Co. and others' No. 1 Sadler was given an adjusted allowable of 5,620 bbls. for the months of October and November, which was the amount of oil stricken when the well lost its water rating for these two months.

### Overproduction in Oklahoma City

An unusual condition exists in the Oklahoma City Field. It was found that producers had paid taxes on 54,970,086 bbls. of oil, which is 3,634,691 bbls. more than was reported to the proration officials for a period covering from July 1, 1931, to December 1, 1932. Production reported during that same period totaled 51,335,395 bbls.

This was revealed from records of the tax commission, and was read into the records of the last hearing, held December 23, by S. B. Hudson, auditor in the gross production tax department of the State. This was presented by totals for months only.

It has been rumored a number of times that investigators for both the tax and proration departments have been trying to locate excess production from the Oklahoma City Field, but nothing has been reported. Some delay has been necessary owing to the litigation over the State Supreme Court's decision in the Wilcox Oil & Gas Co. case.

The following tabulation shows the amount of oil on which gross production tax has been paid, as compared to the amount of production reported to the proration department:

| | Production | |
|---|---|---|
| Months— | Tax paid bbls. | Reported bbls. |
| July, 1931 | 4,779,748 | 4,966,043 |
| August | 976,613 | 667,027 |
| September | 671,931 | 205,504 |
| October | 3,593,523 | 4,609,756 |
| November | 5,027,919 | 5,339,679 |
| December | 5,547,736 | 5,584,785 |
| January, 1932 | 3,714,047 | 3,347,389 |
| February | 2,975,459 | 2,422,119 |
| March | 3,854,436 | 2,967,134 |
| April | 3,516,029 | 3,079,085 |
| May | 3,409,975 | 3,165,333 |
| June | 3,259,504 | 2,948,814 |
| July | 3,424,973 | 2,816,839 |
| August | 3,639,823 | 2,543,893 |
| September | 2,437,651 | 2,103,977 |
| October | 2,236,461 | 2,222,188 |
| November | 2,654,000 | 2,256,207 |
| Total | 54,970,086 | 51,335,395 |

### Carter County

Carter Oil Co.'s No. 3 Robb, SE cor. SW SW NW Section 19-1s-2w, was completed for 445 bbls. from 1,725-1,823 feet.

### Creek County

Doke and Hughes' No. 1 Martin, SE cor. NE NE SW Section 1-19-9, is a rig. Curtis Oil Co.'s No. 1 Littlehead, C NW NW Section 10-17-10, is a rig. Whittington & Page's No. 1 Webb, NW cor. NE SE Section 26-17-11, is a rig. C. A. Mechling's No. 4 Daniel, CNL SE SW NE Section 32-17-11, is a location. Big Four Petroleum Co.'s No. 1 McIntosh, SE cor. SW Section 34-19-8, made 135 bbls. from 2,600-30 feet. L. B. Jackson's No. 2 Wells, SW cor. NW Section

26-18-8, made 50 bbls. from 1,308-40 feet. Kirchner and others' No. 6 Johnson, CEL SW SE Section 14-17-8 (old well drilled deeper) was drilling at 2,480 feet. C. D. Tibbens' No. 1 well, SE cor. NE NW Section 18-14-9, had a showing of oil at 1,211-18 feet. Hyer and Horner's No. 1 Bruner, SE cor. NE NW Section 15-14-10, made 17 bbls. after plugged back to 2,731-59 feet; total depth 3,324 feet.

**Comanche County**

Becker and others' No. 1 Ritchie, SE cor. SW SW Section 19-2-9w, is a rig.

**Garfield County**

Continental Oil Co.'s No. 1 Thompson, NW cor. SW SW Section 7-24-4w, is a location.

**Hughes County**

Sovereign Oil Co.'s No. 1 Jacobs, NW cor. SE NE Section 16-7-8, was completed for 428 bbls. from 2,915-29 feet.

**Jefferson County**

O. V. Beck's No. 5 Seay, NW cor. NE SW SE Section 34-6s-5w, is a rig.

**Logan County**

Eason Oil Co. and others' No. 1 Gun Club, NW cor. NE Section 10-16-4w, was abandoned at 6,504 feet.

**Lincoln County**

Pure Oil Co.'s No. 1 Meyers, No. 1 well in Section 1-15-6, is a rig.

**McIntosh County**

Harmon Oil Co.'s No. 7 Porter, NE cor. SW SW Section 3-12-14, was abandoned at 2,217 feet.

**Noble County**

Stanolind Oil & Gas Co.'s No. 1 Bolay, C SW NW Section 16-20-2w, is a location. J. McCullough's No. 1 Reginer, NW cor. SE Section 1-24-1w, is a machine.

**Osage County**

Sinclair Prairie Oil Co.'s No. 1 well, SE cor. SW SE Section 13-24-7, made 35 bbls. from 2,515-55 feet.

**Oklahoma City**

Phillips Petroleum Co.'s No. 1 Roly, CEL SE NE Section 2-11-3w, made 9,649 bbls. in four hours from 6,247-6,350 feet. Same company's No. 1 Logue, CSL NE SW Section 15-11-3w, made 3,869 bbls. from 6,431-6,534 feet, in four hours. Same company's No. 2 Drew, CSL NW SE Section 22-11-3w, made 3,819 bbls. in four hours from 6,470-6,580 feet. Same company's No. 1 Berg, NE cor. SW Section 26-11-3w (old well drilled deeper) made 120 bbls. in four hours, total depth 6,640 feet. Anderson & Kerr and others' No. 1 Potts, SE cor. NW Section 15-11-3w, made 2,653 bbls. from 6,387-6,545 feet. Verser and others' No. 1 Strough, SW cor. NE SE Section 15-11-3w, was abandoned at 263 feet.

**Okmulgee County**

Trail and others' No. 1 Lannen, SW cor. SE Section 26-16-11, is a location. J. L. Selby and others' No. 1 Connor, CWL NE NW Section 6-14-15, is a machine. F. D. Misener's No. 1 Colbert, SE cor. NW Section 14-14-14 (old well drilled deeper), total depth 1,702 feet, cleaning out. C. Smith's No. 3 Rentie, NE cor. SW SW Section 18-14-15, made 12 bbls. from 1,126-1,210 feet. E. W. Wicks' No. 2 Lovett, NE cor. NW Section 2-13-12, was abandoned at 2,802 feet. Cole and Claypool's No. 1 Banks, NE cor. NW SE Section 5-13-12, was abandoned at 3,018 feet.

**Pontotoc County**

Deaver Oil Co.'s No. 1 Layne, SW cor. SE NW Section 30-5-5, is a rig. Cremer & Russell's No. 1 Taylor, NE cor. SW Section 5-3-7, is a machine. Boetcher Oil & Gas Co.'s No. 1 Huber, NE cor. SW NW Section 7-3-7, is a location. Ray Jack's No. 1 Cummins, SW cor. NW NW Section 2-4-8, was drilling at 700 feet. W. C. Hughes' No. 1 fee, SE cor. SW SE NE Section 25-4-7, was drilling at 400 feet. Lake Oil Co.'s No. 2 Mallory, SW cor. NW SW Section 30-5-5, made 150 bbls. in four hours from 2,390-2,400 feet.

**Payne County**

F. C. Hall's No. 1 Newby, SW cor. NW Section 28-19-5, was drilling at 2,400 feet.

**Pawnee County**

E. O. Platter's No. 5 well, SE cor. SW SW SW Section 30-21-9, made 12 bbls. from 1,055-1,105 feet. R. J. Bookout's No. 2 Pierce, NE cor. SE SW Section 20-20-10, made 20 bbls. from 1,840-81 feet.

**Okfuskee County**

Dulin and others' No. 1 Ingram, SE cor. NW Section 13-11-11, is a rig.

**Pottawatomie County**

Gypsy Oil Co.'s No. 1 Tenuas, SE cor. NW Section 25-6-4, is a rig. Anderson-Kerr's No. 1 Zoller, NW cor. SW Section 5-6-5, was abandoned at 2,915 feet.

**Seminole County**

Payne Drilling Co.'s No. 1 Bruner, SW cor. SE SW Section 29-10-6, was abandoned at 3,925 feet. Oils, Inc.'s No. 1 Marks, NW cor. NE Section 32-10-6, was abandoned at 3,985 feet. Oils, Inv.'s No. 1 Barbe, SW cor. Section 4-8-6, was abandoned at 4,210 feet.

**Stephens County**

G. Pace's No. 1 Baker, NE cor. NW Section 35-2s-6w, is a rig. Same operators' No. 1 Watkins, SW cor. NW Section 22-2s-7w, was abandoned at 2,031 feet. Becker and others' No. 1 Wilson, C E half NE SW Section 20-2s-7w, was abandoned at 1,922 feet.

**Tulsa County**

Lovett and others' No. 1 Ka-La-Ve, NE cor. NW SE Section 32-19-12, is a rig. G. S. Voorhees' No. 1 Orcutt, NE cor. SE SE SW Section 28-19-13, was abandoned at 1,230 feet. Dunn and Green and others' No. 6 Flippen, NE cor. SW SE Section 28-18-14, was abandoned at 2,140 feet.

**Wagoner County**

J. E. Martin's No. 3 Drew, SE cor. NE SW Section 26-18-15, was completed for 10 bbls. from 940-70 feet. Sands Petroleum Co.'s No. 1 Hall, SW cor. NW NW Section 24-18-15, was abandoned at 1,055 feet. Stanbury and others' No. 2 Drew, SW cor. NE NE Section 26-18-15, was abandoned at 1,078 feet.

## Wildcat Operations in Oklahoma

### Northern Oklahoma

**ATOKA COUNTY**

| Company, farm and location— | Remarks: |
|---|---|
| Independent Oil Co.'s No. 1 D. James, C NE NE Sec. 28-2-15 | Est. 15 bbls. 371-90 and 394-426 ft. |
| Barton's No. 4 Miller, SE NW SE SW Sec. 26-1-14 | S.D. 505 ft. |
| Hicks' No. 2 Morris, SE NE NW SE Sec. 5-1-15 | Drlg. sand 175-262 ft., estimated 2 bbls. |
| George's No. 1 Reddin, SW NE SW Sec. 19-1-15 | S.D. 640 ft. |

**BECKHAM COUNTY**

| | |
|---|---|
| Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w | Drlg. 1,950 ft. |
| Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w | S.D. 2,550 ft. |
| White et al's No. 1 Green, SW cor. Sec. 34-10-24w | S.D. 3,575 ft. |

**BLAINE COUNTY**

| | |
|---|---|
| Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w | S.D. 1,205 ft. |

**CADDO COUNTY**

| | |
|---|---|
| Denver P. & R. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w | Drlg. 2,700 ft. |
| Abernathy & Brown's No. 2 Houston, Sec. 24-6-12w | S.D. 1,115 ft |

**COAL COUNTY**

| | |
|---|---|
| Dodd & Burton's No. 1 Grigsby, NW SE NE Sec. 35-1-8 | S.D. 1,100 ft. |
| Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8 | S.D. 2,750 ft. |

**COMANCHE COUNTY**

| | |
|---|---|
| G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w | S.D. 1,450 ft. |

**CREEK COUNTY**

| | |
|---|---|
| O. O. Owen's No. 1 fee, NW cor. Sec. 23-15-7 | U.R. 3,078 ft. |

**CUSTER COUNTY**

| | |
|---|---|
| Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w | Location. |

**ELLIS COUNTY**

| | |
|---|---|
| Algers Pet. Co.'s No. 1 Roper, C SE NW Sec. 21-20-24w | S.D. 50 ft. |

**GRADY COUNTY**

| | |
|---|---|
| English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE Sec. 32-3-7w | S.O. 3,255-87 ft; S.D. 3,504 ft. |

**GARFIELD COUNTY**

| | |
|---|---|
| E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w | S.D. 5,850 ft. |

**GREER COUNTY**

| | |
|---|---|
| French's No. 1 Murphy, SW NW Sec. 22-7-21w | S.D. 1,645 ft. |

**HASKELL COUNTY**

| | |
|---|---|
| Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 | S.D. 2,000 ft. |
| Ault et al's No. 1 Hall, SE NW Sec. 25-19-9 | S.D. 200 ft. |

**HUGHES COUNTY**

| | |
|---|---|
| Nash-Redwine's No. 1 Uri, C NE Sec. 10-5-11 | Drlg. 1,130 ft. |

**KAY COUNTY**

| | |
|---|---|
| Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 | Location. |
| Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 | S.D. 3,693 ft. |

**KIOWA COUNTY**

| | |
|---|---|
| Emenhiser et al's No. 1 Pace, SW cor. Sec. 3-4-17w | Location. |
| McWhirter et al's No. 1 Vanderneck, NE NW Sec. 3-7-15w (O.W.D.D.) | T.D. 1,902 ft.; C.O. |
| McWhirter Bros.' No. 1 Kline, SE NW Sec. 5-6-16w | S.D. 830 ft. |
| Christian's No. 1 Jones, NE SE Sec. 8-7-18w | S.D. 1,610 ft. |

**LOGAN COUNTY**

| | |
|---|---|
| Eason Oil et al's No. 1 Gun Club, NW NE Sec. 10-16-4w | S.D. 6,504 ft. |

**NOBLE COUNTY**

| | |
|---|---|
| Stanolind O. & G. Co. et al's No. 1 Kalb, C NE NW, Sec. 33-20-2w | Drlg. 5,010 ft. |
| Rollins et al's No. 1 Frank, SE SW Sec. 6-20-2w | Rig. |

**OKLAHOMA COUNTY**

| | |
|---|---|
| Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w | S.D. 1,200 ft. |
| L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w | S.D. 5,515 ft. |

**PAWNEE COUNTY**

| | |
|---|---|
| G. N. Mainess and Westfield Drlg. Co.'s No. 1 Schildberg, NW SW NW Sec. 27-22-6 | S.D. 607 ft. |
| Deep Rock's No. 1 Crow, NE SE Sec. 26-23-5 | Drlg. 1,525 ft. |
| Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 | S.D. 1,950 ft. |

**PITTSBURG COUNTY**

| | |
|---|---|
| Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 | S.D. 1,675 ft. |

**PONTOTOC COUNTY**

| | |
|---|---|
| Choctaw O. & G. Co.'s No. 1 Thompson, SW NE SW Sec. 1-1-7 | Machine. |
| Delaney's No. 1 Harden, NE SW Sec. 30-2-7 | S.D. 875 ft. |
| Blackwell Oil & Gas Co.'s No. 1 Abbott, NW SW NE Sec. 14-4-6 | Drlg. 1,530 ft. |
| Williams' No. 1 Krath, NE SE Sec. 33-3-4 | S.D. 1,545 ft. |
| Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6 | S.D. 570 ft. |
| Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-3 | Abnd. 3,096 ft.; water. |

**POTTAWATOMIE COUNTY**

| | |
|---|---|
| Payne Drlg. Co.'s No. 1 Lovelace, NW SW NW Sec. 27-6-4. | Rig. |

**ROGER MILLS COUNTY**

| | |
|---|---|
| Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w | S.D. 5,150 ft. |
| L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w | S.D. 3,420 ft. |

**SEMINOLE COUNTY**

| | |
|---|---|
| Carter Oil Co.'s No. 1 Keokuk, C N half NW NE Sec. 2-10-6 | Rig. |
| Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 | Sand 1,395-1,405 ft.; water; fishing 1,640 ft. |

**WASHITA COUNTY**

| | |
|---|---|
| Miley Pet. Co.'s No. 1 Montgomery, SW NW SE NW Sec. 28-9-17w | Drlg. 1,310 ft. |
| Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 33-9-17w | Rig. |
| Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w | Show oil 2,459-67 ft.; S.D. 2,757 ft. |
| Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 | S.D. 2,160 ft. |

### Southern Oklahoma

**ATOKA COUNTY**

| | |
|---|---|
| L. E. Stewart et al's No. 1 Stewart, SE SE Sec. 2-4s-10 | Drlg. 950 ft. |
| Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 13-3s-10 | S.D. 3,425 ft. |

**JEFFERSON COUNTY**

| | |
|---|---|
| G. W. Haines' No. 1 Woolsey, SE SW NE Sec. 4-3s-6w (O.W.D.D.) | C.O. 2,261 ft. |
| J. D. Wakefield et al's No. 1 Kelly, NW SE Sec. 1-5s-5w. | Spudded and S.D. |

**MARSHALL COUNTY**

| | |
|---|---|
| Lee Cross' No. 1 Hamlin, SE SW SW Sec. 26-5S-5 | Fishing 775 ft. |
| Thomas' No. 1 Setliff, SW SE SE SW Sec. 36-5s-6 | S.D. 645 ft. |

**McCURTAIN COUNTY**

| | |
|---|---|
| Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25 | S.D. 2,778 ft. |

**PUSHMATAHA COUNTY**

| | |
|---|---|
| Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18 | S.D. 2,096 ft. |

**STEPHENS COUNTY**

| | |
|---|---|
| Bridwell Oil Co. et al's No. 1 Weldon, NE SW SW NE Sec. 12-3s-8w | Spudding. |
| Calif. Prod. & Oper. Co.'s No. 1 Garnett, SE NE NE Sec. 11-3s-6w | 2,000,000 ft. gas 325 ft. |
| Calif. Prod. & Oper. Co.'s No. 1 Suton, NE SE SW Sec. 12-3s-6w | Spudding. |
| Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8w | Drlg. 2,050 ft. |
| George's No. 1 Ryan, NW SW NE Sec. 31-2s-15 | S.D. 510 ft. |

**TILLMAN COUNTY**

| | |
|---|---|
| Emenheser et al's No. 1 Pace, C SW Sec. 3-4S-17w | Location. |
| Gypsy Oil Co.'s No. 1 Pitcher, NW Sec. 26-4s-15w | Rig. |

## Kansas

(Continued from Page 39)

drilled deeper) was recompleted for 98 bbls. from a total depth of 3,305 feet.

**Greenwood County**

Harwood and others' No. 1 Barnard, NW cor. SW Section 33-22-10, is a rig. C. Reeser's No. 1 Hull, NW cor. SE Section 8-26-9, was spudding. Empire Oil & Refining Co.'s No. 4 Duby, NW cor. NE SW Section 14-22-11 (old well drilled deeper) was completed for 55 bbls. from a total depth of 1,960 feet.

**McPherson County**

Helmerich and Payne's No. 1 Russell, SE cor. NE Section 23-19-2w, is a location. Lario Oil & Gas Co. and others' No. 1 Neufeldt, SW cor. NW Section 34-21-3w, was given a potential of 2,018 bbls. from 3,472-75 feet. Olsen Oil Co. and others' No. 2 Koehn, NE cor. SW SE Section 36-19-2w (old well drilled deeper) was drilling at 3,001 feet. Darby Petroleum Co.'s No. 1 Doane, NW cor. Section 28-19-1w, made 165 bbls. from a total depth of 3,411 feet. Spencer and others' No. 2 Neufeldt, NW cor. SW SE Section 16-21-3w, made 680 bbls. from 3,429-36 feet. All States Oil & Gas Co.'s No. 1 Neufeldt, SE cor. SW NE Section 21-21-3w, made 65 bbls. after plugged back to 3,128-33 feet; total depth, 3,512 feet. Holcomb and Turner's No. 1 Wattner, SW cor. NE SE Section 19-20-2w, is an abandoned location.

**Stafford County**

Atlantic Oil Producing Co.'s No. 1 Gates, NW cor. SE Section 27-21-13w, is a location. Stanolind Oil & Gas Co.'s No. 1 Figger, NE cor. Section 1-23-12w, is a location. Stringer and others' No. 1 Swindler, SW cor. NE Section 2-25-11w, was abandoned at 50 feet.

**Woodson County**

Sheedy and others' No. 1 Mills, NE cor. SE NW Section 24-25-13, was drilling at 1,400 feet. Same operators' No. 1 Atkins, NW cor. SW Section 19-25-14, was completed for 196 bbls. from 1,402-77 feet.

# Completion in Converse Area, Sabine Parish, La., Makes 360 Bbls., New Miller County Well

By D. H. BANCROFT
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Jan. 23.—Completion of Gibson & Johnson's No. 2 Frost-Johnson, in the NW NE Section 15-9-13, Converse area of Sabine Parish, as a 360-bbl. producer from 1,901 feet, and a drill stem test resulting in oil and water from 2,948 feet on an offset to the Miller County, Arkansas, discovery well were the high lights of the week's developments in this division. Otherwise, results were 10 completions and 12 new operations begun. Five of the completions and seven of the new jobs were in Sabine Parish, most of them in Zwolle, and one completion and two new locations were in Miller County.

There is still as much discussion as ever as to just what Converse production comes from. The discovery well is still producing from a sandy marl at around 1,620 feet, whereas this second well, 3 miles northeast, is producing from a chalk, supposed to be the Zwolle chalk. It cored sand from 1,490-97 feet, showed oil at 1,516 feet and swabbed dry but filled up 600 feet in oil overnight for two or three nights; had another show of oil in chalk at 1,901 feet, failed to produce and was given the acid treatment resulting in its present performance. The first 24 hours it flowed 560 bbls. and has since settled down to a rated 360 bbls. per day flowing through 6-inch casing with the valve just cracked. Tubing collapsed and will be pulled and in the end the well may do better than it is rated at present.

The Miller County well, Baker & McMurray's No. 1 Olivet, NW NE Section 4-16-26, made a drill stem test of 11 feet of oil sand but went 2 feet into salt water sand, total depth 2,948 feet, and got 124 bbls. of oil and 24 bbls. of water in 20 minutes. Duluth-Arkansas Oil Co.'s No. 1 H. E. Beck, NW SW Section 34-15-26, to the north of the discovery well, was coring at 2,954 feet and will go to 3,000 feet if necessary. Failing to get production by that depth, it will plug back to around 2,820 feet where it cored 4 feet of saturated sand that filled the hole 800 feet in oil.

### NORTH LOUISIANA

Blanchard gas district of Caddo Parish had a failure when Nick Barbare's No. 1 Puckett, NE NE Section 6-18-16, was dry and abandoned on drill stem test at 2,818 feet. Beaver Petroleum Co.'s No. 1 Long-Bell Lumber Co., NW NW Section 34-2s-8w, Beauregard Parish, is the third well to be started at DeRidder in the course of the play along the Conroe-Jackson trend which up to date has been mostly a leasing campaign but has all the earmarks of being the scene of quite a bit of drilling during the ensuing year.

Honeycutt Oil Co.'s No. 1 Porter, NW NE Section 26-12-13, DeSoto Parish, a wildcat a few miles southeast of Mansfield, was dry and abandoned in broken sand and shale at 3,023 feet with gas shows at 2,740 feet and 2,855-2,907 feet as the only encouraging symptoms. Walters Nicholson, trustee's No. 1 Jim Guy, NW SE Section 3-11-13, got salt water at 2,765 feet and is abandoned after a show of oil. Carbons Consolidated Co.'s No. 7 Guthrie, SW SW Section 50-20-4e, Ouachita Parish, in the Monroe gas field, gauged 21,456,000 feet of gas at 465 pounds from 2,168 feet.

Baird, Stone & McFaddin's No. 1 Roy Duggan, NE SE Section 14-7-11, Zwolle district of Sabine Parish, responded to acid treatment flowing 400 bbls. from 2,637 feet. Frank Foster and others' No. 1 C. J. Gaddis, NE NE Section 20-9-11, southeast of the Pleasant Hill production and south of the oil and gas that was developed to the north of the location, was a dry hole at 3,453 feet and abandoned. There is some talk of another well north of the lone producer that has been developed in this area but the owners of the block have not made up their minds yet on this point. Kilgore and others' No. 2 Thomas was abandoned as a dry hole at 2,502 feet. E. F. Neely's No. 6 Ponder, SW NW Section 15-7-11, is listed as a completion swabbing 100 bbls. daily from 2,494 feet. Evans Brothers' No. 1 Cranford, SE NE Section 20-9-13, Converse area of Sabine Parish, was coring just below 1,500 feet expecting to hit the shallow pay developed by the two Gibson-Johnson wells. It is approximately 1¼ miles east of their No. 1 Frost-Johnson, the discovery well, and 2 miles southwest of the new producer brought in this week.

#### New Locations

New locations in Sabine, all but one in Zwolle, were Ellis & Dumas' No. 1 Pickering Lumber Co., SE SE Section 13-4-12, in the extreme southwest tip of the parish and southwest of the Hoff & Gable block just assembled. Coming Oil Co. is rigging up to drill No. 1 T. L. Andries, NE SE Section 15-7-11, an old location drilled to 100 feet and abandoned by Tuffree and others last October. Corporation Oil Co. made location for No. 2 Eberts in the SE SE Section 36-8-11, and Investors Production Co. has set 10-inch surface string and is drilling below 150 feet on No. 1 S. J. Williams in the NW NW Section 24-7-11. Pugh-Hickman Drilling Co.'s No. 1 Blackman, NW NW Section 36-8-12, is a location. Robertson Drilling Co. made location for No. 1 J. W. Hughes, 1,820 feet west of the center of Section 36-8-12, and The Texas Company has derrick up for No. 1 C. E. Cooper, in the NW cor. NE SE Section 30-8-11.

In Bossier Parish, the Gulf Refining Co. has embarked on a core drilling campaign on its Plain Dealing block and will test out the contact of the Cane River and Wilcox, planning a number of wells to go to 400-500 feet. Someone, identity not learned, is doing a lot of torsion balance work in Bienville Parish, where lately there have been three new jobs started. R. T. Henderson is bailing to test No. 1 Sistrunk, a Sabine Parish wildcat in the SE NW Section 9-9-12, between the Foster well referred to and Pleasant Hill production, at 1,699 feet. It claimed a show of oil last month at 1,500 feet and cemented 6-inch at 1,670 feet. George LeGrand's No. 1 McGough, Section 2-8-10, Sabine Parish, just south of Marthaville, in a rather favorably looked on area, reported a small show of gas at 2,410 feet and is bailing to test. Rotary Oil Corp.'s No. 1 Hale, in the southwest extension of Zwolle, was in hard chalk with a show of oil in a break at 2,373 feet, total depth 2,424 feet. In Pleasant Hill territory, C. W. Smith's No. 1 Patterson, SE NW Section 33-10-11, cored sand at 3,436-40 feet and is arranging for a drill stem test.

C. G. Hoff and Clarke Gable have blocked 22,000 acres centering on Section 14-3-12, Sabine Parish, west of Hornbeck, in the southwestern tip of the parish with part of the block extending into Vernon, with a drilling obligation calling for three 2,000-foot wells to test the same formations from which Urania Field in LaSalle Parish on the opposite side of the State is producing. Bob Edwards, former scout for Gulf Refining Co., will do the drilling and it is hoped to find the Urania pay between 1,600 and 1,700 feet, with the first location probably in Section 11-3-12, to be begun by March 25. Several years ago Toro Petroleum Co. drilled half a dozen wells in Sections 24-3-12 and 17, 18 and 19, Township 4, Range 11, all of which made more or less of an oil show, particularly the one in Section 19. Crater Oil Co. drilled a well across the state line in Sabine County that blew out at 1,600 feet and the same company is reported leasing again in the northwest corner of Vernon Parish and across the line in Sabine County, Texas. Llano Co-operative Colon's No. 1 fee, NW NE Section 34-2n-9w, Vernon Parish, 4 miles north of Leesville, is reported to have cored sand at 3,617 feet and arranging to make a drill stem test of a show of oil, total depth 3,629 feet.

### ARKANSAS

Two new locations were made in Miller County, Arkansas, Duluth-Arkansas Oil Co.'s No. 1 Price, NE NE Section 17-16-25, and E. H. R. Sabens' No. 1 E. V. Olivet, in the NE SW Section 4-16-26. Rhinehart & Trottner have derrick up for No. 1 C. H. Jones in Section 2-13-26, Hempstead County, a rank wildcat, 4 miles northeast of Fulton on the Red River, 15 or 20 miles east of Texarkana and about the same distance northeast of the Miller County play. Lawrence B. Cook's No. 1 McGehee Planting Co., NE SW Section 5-8-11, Lincoln County, previously reported in error as dry and abandoned at 3,250 feet, is coring at 3,300 feet. Similarly, B. F. Thompson's No. 1 Rosser, SE SE Section 7-5-2w, Woodruff County, previously erroneously reported as abandoned at 510 feet, is drilling shale with streaks of lime after having considerable trouble with caving hole. The dry hole in Miller County was C. B. Lenz' No. 1 Arthur Dean, SE SE Section 19-15-25; after a drill stem test at 3,485 feet and another at around 2,852 feet. L. L. McDonald made location and has derrick up for No. 1 J. A. Robertson, in the NE NW Section 25-15-16, Ouachita County, on the fringe of the old Smackover Field.

A. E. Roscoe's No. 1 Vernon Towell, in the H. L. Edwards 340 acres of the Lewis Watkins Survey of Harrison County, Texas, reported last week as having cored 16 feet of sand at 3,600-16 feet, suspected of being the Woodbine, is shut down at that depth after a salt water show and may be abandoned at contract depth of 3,700 feet. If so, the owners plan to move over and start a new test.

E. L. Chapman's (General Minerals Corp.'s) No. 2 Pickering Lumber Co., in the D. S. Height Survey of Shelby County, reported to have cored 20 feet of sand showing gas enough to push mud half way up the derrick, cored lime at 4,005 feet and was arranging to plug back to 3,870 feet where it got the gas. Prairie Creek Crude Co.'s No. 1 Ellington, in the J. Burleson Survey, was swedging collapsed 6-inch casing to set 4½-inch, total depth 3,442 feet with the 6-inch cemented at 3,360 feet.

#### Pipe Line Runs

Daily average runs from the field, helped by an increase of 965 bbls. in Caddo light oil and 790 bbls. in shipments from Zwolle, showed a net increase of 1,715 bbls. Runs from the several pools were:

NORTH LOUISIANA

| | Bbls. |
|---|---|
| Caddo, light | 5,010 |
| Caddo, heavy | 1,855 |
| Cotton Valley | 660 |
| DeSoto-Red River | 1,785 |
| Elm Grove | 360 |
| Haynesville | 3,840 |
| Holly | 240 |
| Homer | 2,700 |
| Pleasant Hill | 270 |
| Sarepta-Carterville | 710 |
| Urania | 3,300 |
| Zwolle | 9,520 |
| Total | 30,245 |
| Last week | 28,495 |
| Increase | 1,350 |

ARKANSAS

| | |
|---|---|
| Champagnolle | 1,500 |
| El Dorado | 2,630 |
| Lisbon | 460 |
| Miller County | 750 |
| Nevada County | 900 |
| Smackover, light | 2,685 |
| Smackover, heavy | 22,800 |
| Stephens | 270 |
| Urbana | 570 |
| Total | 32,165 |
| Last week | 32,200 |
| Decrease | 35 |
| Both states | 62,410 |
| Last week | 60,695 |
| Increase | 1,715 |

## Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

### North Louisiana

AVOYELLES PARISH

| Company, well, farm name, section and block— | Remarks: |
|---|---|
| T. J. Woodley, tr.'s No. 1 Thompson & Kolts, 2,640 ft. E, 200 ft. S, NW cor. Sec. 11-2n-5e | Washing to bottom; T.D. 2,250 ft. |

BEAUREGARD PARISH

| | |
|---|---|
| Beaver Pet. Co.'s (S. T. Ongett, tr.) No. 1 Long-Bell Lbr. Co., 155 ft. S, 725 ft. S, NW cor. NW NW Sec. 34-2s-8w | Began drlg. Jan. 15; cmtd. 10-in. |
| Trapp & Turnbow's (was Trapp Oil Synd.) No. 1 Long-Bell Lbr. Co., Sec. 36-2s-10 | Rigging up. |
| Trapp & Turnbow's No. 1 S. T. Roberts, 150 ft. S and E, NW cor. NW NE Sec. 6-3-10 | Location. |

BIENVILLE PARISH

| | |
|---|---|
| Granver Oil Co.'s No. 1 T. J. Lawhon, 150 ft. N and W, SE cor. NE SE Sec. 15-16-8 | Location. |
| M. H. Marr et al's No. 1 Caldwell, 450 ft. E, 150 ft. N, center Sec. 23-16-5 | Began drlg. Jan. 16; cmtd. 10-in. 140 ft. |
| R. S. Ross et al's No. 1 W. M. Beck, NE NE Sec. 3-15-8 | Rig up. |
| Texana Oil Co.'s No. 1 Lawson, 180 ft. W, 600 ft. S NE cor. NW NE Sec. 28-16-9 | Drlg. 675 ft. |

(Continued on Page 51)

# Gasser Completed 7 Miles From Sarnosa Pool, Duval County, Texas; Wildcatters Active

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Jan. 23.—Smith & Capps, who brought in a 20,000,000-foot gas well late last week in Survey 178, 7 miles southwest of the Sarnosa Pool in Duval County, have moved to the east to get down the dip and will drill No. 2 and on its completion will depend whether or not it is to be a new oil field. The new spot occupies a position along the general trend of the Government Wells group of pools that makes it look auspicious and the sand in which the gasser was completed is the same as that producing in the Government Wells group. The discovery well of the Sarnosa Pool was a gas well and the second test drilled came in an oil well.

A gas well on the west edge of the North Government Wells Pool was brought in the past week which may indicate a western edge to that field. It is The Texas Company's No. 5 Johnson, 990 feet from the west line of Survey 42 and 330 feet from the south line of the north half of the southwest quarter of the survey. It is 660 feet west of the No. 4 Johnson on the same lease which is the westernmost oil producer in that end of the field.

This gasser comes in after Edwin M. Jones and Buckner & Graham have each started tests one location west of the west line of Survey 42 and about 1,000 feet west of this test. However, some have the idea that the structure is an anticline and that there will be oil production on each slope. C. P. Scott's No. 1 Kidd, in Survey 56, a mile west of production, had a sand and a showing of oil and there was some mechanical trouble and it has been standing at 2,264 feet. It is understood he will try to complete it. At any rate the territory parallel to the pool and laying from half a mile to 1½ miles west from the field is getting a lot of attention.

### Completion Makes 15 Bbls. Hourly

One of the completions of the week is the Central Producer's No. 5 Tuck-Johnson, 660 feet south and 660 feet west of The Texas Company's No. 5 Johnson, the gas well. Central Producers' well came in for 15 bbls. an hour and the Edwin M. Jones location, mentioned above, is 480 feet west and north of it.

Several new locations have been made in the wildcat territory extending on northeast from the North Government Wells Pool into McMullen County.

The Jaqua & Crow test in the Hagist which spudded in some months ago and has been standing is ready to start making hole. S.R.C. Oil Co. has spudded in on Survey 47 in southern McMullen County, and Plymouth Oil Co. owns a block 8 miles west of it which it is understood it may drill.

Buchanan, Schoolfield & Frasher, who completed a dry hole in Survey 118 just over the line in northern Duval County, are moving to Survey 115 which corners on No. 118 on the northwest and will drill No. 1 Pursch just over the line in McMullen County.

Also Henderson Coquat has become interested with Shumway in the Shiner ranch, farther northeast near the center of the east half of McMullen County and will drill two tests on that ranch.

Stanley Smith set casing in his No. 1 Pena, in Survey 79, 7 miles east of the North Government Wells Pool and will seek to make a producer at 1,915-30 feet which is presumed to be the Cole sand.

West of the North Government Wells Field, Moca Oil Co.'s No. 2 Duval County Ranch Co. was last reported drilling below 1,600 feet, having missed the pay at 900 feet which made a 100-bbl. well in No. 1.

### Frio County Wildcat

Amerada Petroleum Corp.'s No. 1 Halff & Oppenheimer, in Frio County, is the most intensely watched wildcat in Southwest Texas at this time. Late last week it was down 6,233 feet and making 20 to 30 feet a day and expecting the Edwards at around 6,300 feet. It showed some oil and gas and an odor of sulphur in the Georgetown. Subject to correction the Georgetown was topped at 6,195 feet and the Del Rio at 6,105 feet, giving the Del Rio a thickness of only 90 feet and the Buda had a thickness of 115 feet. If the Georgetown does not thicken up and with the showings the test has had in the Eagleford and Buda and Georgetown there is a chance it may find some oil in the Edwards lime.

This test as has been reported before is on a block of leases with a total of around 80,000 acres and very careful and thorough geological and geophysical work was done it in advance. It is also pure wildcat and not only drilling at considerable distance from any production but at considerable distance from any previous wildcat drilling.

### Bee County

Conservative Oil Co. is still working with No. 1 Coutts, in the Tuleta Field, topped the Yegua at 4,275 feet but got salt water and last depth is 4,313 feet but it was not looking encouraging for production in that formation. It showed for a pretty good gas well in the Pettus sand at 4,091-4,112 feet.

It is possible that No. 1 Coutts may plug back to the Pettus sand. In the meantime oeprators are not through with the field for there are plans that may materialize in H. H. Weinert drilling two Yegua sand tests to the northeast of production a couple or three locations. The Texas Company has made a location for No. 2 Cox in the southwest corner of its 80-acre lease and half way between the discovery well of the field on the east and the Dirks Brothers Yegua sand well on the west being a half mile from each. Nichols, who drilled the discovery well, is arranging for a test south of the field a few locations and Grisham is making a location far to the north. If they are all drilled they will pretty effectively test out any further possibilities of the field.

### Webb County

Laurel Field had only a slightly more encouraging report to make this week. The Reward Oil Co.'s No. 1 Laurel, one location west of the big 720-bbl. per day well of the South Texas Oil Co., first looked like a small well but is reported this week as pumping 6 bbls. per hour. The other two big wells at the south end of the field flow, and this test therefore seems to indicate western limits of the field. Dyck Oil Co.'s No. 1 Garcia and Villareal, completed flowing 600 bbls. daily through half-inch choke with no tubing was the first of the wells drilled on the south, 3,000 feet south of nearest production and the South Texas Oil Co.'s No. 9 Laurel for 720-bbl. daily is a north offset and in Survey 271, the Dyck Oil Co. test being in Survey 1,100. Reward's test is a west offset to the No. 9 Laurel.

O. W. Killam, a half mile southeast, got a dry hole. Magnolia Petroleum Co.'s east offset to the Dyck No. 1 was bailing at 2,206 feet with some chance of it making a good well and Dyck Oil Co.'s No. 2, a west offset to No. 1 and a south offset to Reward Oil Co.'s No. 1 Laurel, was bailing at 2,179 feet. There is room for a narrow field between the Killam test and the producers northwest of it, and extending an unlimited distance northeast and southwest.

The next interest is the Smith & Story and Wolcott & Rehmet No. 1 Sarah Lloyd, a half mile northeast of the discovery well. It is getting started and if it should make a well and be followed by developing a considerable area of production around it and on to the northeast it will give the field a chance for expansion.

### Goliad County

Sam Vanderweiss' No. 1 Kaufman, in Goliad County, did not look so good. It is about a half mile east of the Zoch discovery well on the Kaufman tract which made a gas well and some oil at 4,232 feet. Vanderweiss' test is last reported at 4,310 feet. It had some hard sand at 4,244-64 feet but failed to show up on a test and is drilling ahead.

### Starr County

Great Plains Oil Co.'s No. 1 Sanchez, in Survey 344, in the western part of Starr County, has made considerable hole and is down around 2,400 feet in a scheduled 4,500-foot test on a high powered block of leases. A shallow rig has been moved in to drill to the oil showing at around 450 feet encountered in the No. 1 which is rigged up with heavy tools for a deep hole.

Both of the wildcat tests which had showings just before Christmas are still waiting. Goodwin & Yantis' No. 1 Seabury, in the northeast corner of Share 5 of Porcion 75, and a mile or more north of the shallow Los Olmos Field, is still waiting to test at 934 feet where it had a good showing compared to production in the field at an average of 480 feet.

The other wildcat is the Jeffries-Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., waiting to test at 1,515-22 feet.

During the week a new important showing was found in a wildcat when B. & B. Oil Co.'s No. 1 Kelsey-Bass, located 6 miles southeast of Rio Grande City, got a showing of gas 6 feet in sand at 4,520 feet. It is reaming to test and the first of this week had about 1,300 feet to ream.

### Kerr County

Eastland Oil Co.'s No. 1 Love, in western Kerr County, at 3,500 feet, seems to be past the sand depth of Evans & Gant's No. 1 Love, a few locations west of it that produced quite a little oil for a time on pump at 3,391 feet. The test is continuing to drill but somewhat dampens the ardor of enthusiasts.

## Wildcat Operations in Southwest Texas

Week Ending January 21

| Company, farm and location— | Remarks: |
|---|---|
| **ARANSAS COUNTY** | |
| F. E. Kestler's No. 1 McCampbell, 150 ft. from N and E lines of Lot 1, Blk. 58, McCampbell ranch | T.D. 3,200 ft; drlg. |
| **BANDERA COUNTY** | |
| Van Winkle's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71 | T.D. 400 ft; standing. |
| E. A. Parkford's No. 1 Duke, 200 ft. from S line, 150 ft. from W line of Sec. 7, G.C.&S.F. Sur. | Location. |
| **BASTROP COUNTY** | |
| Champion's No. 1 Rivers, center W½ of 800-ac. tract in Osborne Sur. | T.D. 1,250 ft; drlg. |
| J. E. Emanuel's No. 1 H. Klemm, 817 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur. | T.D. 263 ft; S.D. |
| Humble O. & R. Co.'s No. 1 Annie Hassler, 750 ft. from W line, 330 ft. from S line of lease in Samuel Wolfenberger Sur. | Moving in. |
| Marts & Beavens' No. 1 Roy Rivers, 860 varas from SE lines, 54 varas from NE lines of Mrs. Lucy Rivers' 582-ac. Elizabeth Standifer Sur. 24 | Rigging up. |
| Properties Trading Co.'s No. 1 Henry Freitag, 400 ft. from SE line, 1,800 ft. from NE line of P. Conley Sur. | T.D. 3,400 ft; S.D. |
| Nelson Pruitt's No. 1 C. Lentz, 330 ft. from NE line, 2,050 ft. from SE line of 400-ac. tract in J. B. Lentz Sur. | T.D. 2,501 ft; waiting on csg. |
| H. Robertson's No. 1 Schmidt, 25 ft. from N line, 850 ft. from W line of D. H. Dyer Sur. | T.D. 185 ft; S.D. |
| Teas and Gant's No. 1 Mikulec, 330 ft. to NW and SW lines of tract in Wm. Barton Sur. | T.D. 1,340 ft; S.D. |
| **BEE COUNTY** | |
| Nichols & Bruner's No. 1 Grover Heldenfels in John Bryan Sur., 891 ft. from S line, 1,950 ft. from E line of tract | T.D. 4,173 ft; reaming to test. |
| W. C. Pool's No. 1 J. C. Wood, 150 ft. N along E line of H.&G.N. Sur. from NE cor. of Mary O'Connor lease, thence 450 ft. E at right angles | Rigged up. |
| **BELL COUNTY** | |
| James Scoggins' No. 2 Warrick, 1,000 ft. to NW line, 2,400 ft. to NE line of 335-ac. tract in Ingram Sur. | T.D. 1,432 ft.; fishing. |
| **BEXAR COUNTY** | |
| C. I. Albertson's No. 1 Hoch, Jett Sur. | Set surface csg. |
| Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio | T.D. 1,054 ft.; standing. |
| Motes-Campbell's No. 1 Pruitt, 550 ft. NE of Trussell's No. 1 Pruitt, 54 varas from E line of tract in Samuel McCollough Sur. | Rigging up. |
| Robert C. Hill's No. 1 Scholl, 1,300 ft. from N line, 1,100 ft. from W line of 161-ac. tract in Sec. 234, Perretaux Sur. | T.D. 894 ft.; S.D. |
| Rollin V. Hill, Sr.'s No. 1 Max Boeck, 1,700 ft. from N line, 2,700 ft. from E line of tract in J. R. Shepherd Sur. | T.D. 298 ft.; setting csg. |

(Continued on Page 56)

# Few Completions in Central West, With Most of Drilling Wells in Lima Field Shut Down

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Jan. 23.—Completions were few in the Central West Field during the week and most drilling wells in the old Lima Field of northwestern Ohio are shut down, with the exception of the test well of Miller and others on the L. D. Creeger farm, Section 10, Hopewell Township, Seneca County, and Ackerman and others' test on the Barley Waggoner farm, Section 31, Sandusky Township, Sandusky County, which is reported at around 600 feet. McPheron and others moved in a rig for a test on the Carl Smith farm, Section 35, Crane Township, Wyandot County. Carey Oil & Gas Co. abandoned its test on the Joseph Weinandy farm, Section 27, same township, at a depth of 310 feet.

### CENTRAL OHIO

Only three completions were reported from the Central Ohio Field, two being gas wells and one an oil producer. The oil well was drilled by the Brendal Producing Co., in a test on the Diamond Portland Cement grounds in Section 31, Marlboro Township, Stark County, which is reported showing 16 bbls. initial, by swabbing. In the same county, the East Ohio Gas Co. made a location for No. 1 on the Frank M. Deems farm, Section 18, Plain Township. White & Co. have a rig in for a test on the Celesta Kolb farm, Section 17, same township. Cable and others have a rig in for a test on O. Clovis farm, Section 25, Jackson Township, same county. Ohio Fuel Gas Co. has a rig in for No. 2-5709 on the J. F. Geib farm, Section 22, same township.

The Ohio Fuel Gas Co. drilled in a gas well in No. 2-5696 on the Howard J. Cox farm, in Lot 98, Eaton Township, Lorain County.

Murphy and others are drilling No. 2 on the Ward Little farm, Section 17, Perry Township, Coshocton County.

In Belmont County, Bradfield and others' No. 3 on the John Shutway farm, Section 35, Union Township, is a ags well in the second Cow Run sand at 1,057 feet, and may drill deeper.

Jones & French found a hole full of water in the Maxon sand at 854 feet in No. 3 on the Morton French farm, Section 12, Scipio Township, Meigs County. This well may be drilled deeper.

City Natural Gas Works has a rig in for No. 3 on the F. G. Ruff farm, Section 27, Pleasants Township, Fairfield County. Same company has a rig in for No. 2 on the Marshall Orendorf farm, Section 30, Marion Township, Hocking County.

Emerald Petroleum Co.'s test on the Carl F. Mossholder farm, Section 14, Fallsburg Township, Licking County, drilled around 2,500 feet. Everett Gas Co. has a rig up for No. 5 on the Felix Claypool farm, Section 8, Hanover Township, same county.

### INDIANA

The Indiana oil and gas report, compiled by Paul F. Simpson, state gas supervisor, Department of Conservation, Division of Geology, follows, by counties:

Allen County—The Woodburn Gas Co. completed a 25,000-foot well at 1,471 feet on the Fred Norden farm in the NW Section 34, Maumee Township.

Daviess County—Hartman and others completed a dry hole at 1,303 feet on the Sylvester Swan lease in Section 28, Veale Township. A 4½-inch pipe line is to be constructed from Glendale to the main line of the Indiana Southwestern Gas Corp. east of Vincennes. This line will doubtless cause further activity in the Glendale Pool.

Gibson County—The Wabash Public Service Corp. has completed the No. 5 G. B. Allen, in the NE Section 22, Columbia Township, with a reported production of 2,500,000 feet. In the northwest quarter of the adjoining Section 23, the Knox Engineering Corp. completed the No. 1 S. H. Kirk with a reported production of 7,000,000 feet. Same company is down more than 450 feet in the No. 1 G. C. Sampley, in the southwest quarter of this section. Wells drilling by the Knox Engineering Corp. are reported on the Russell Farmer and Charles Steele farms in Section 22.

Hancock County—J. H. Snider completed a small gas well on the Sarah Ross farm in Brandywine Township. He has started another well on the same farm.

Jasper County—J. L. Rosen is drilling a shallow test on the Neal S. Williams farm in Section 26, Gillam Township.

Knox County—The No. 1 William Alsop, drilled by the Glengarry Oil Co., on the SW Section 12, Busseron Township, was dry at 819 feet.

Kosciusko County—The Kosana Oil Corp is down about 500 feet in the No. 1 W. O. Wehrly, in Section 10, Van Buren Township.

Martin County—The John Larkin test, drilled in the SW Section 19, Perry Township, by Sproull & Weitknecht, was not productive, and has been abandoned.

Monroe County—The Ohio Oil Co. and the Petroleum Exploration Co. completed a dry hole in the No. 1 Owen Harris, in the SW Section 33, Benton Township.

Perry County—The No. 4 Mary C. Backer, drilled by Charles E. Dice in the NW Section 13, Troy Township, was abandoned at 725 feet. In Section 14, Clark Township, William Black and others plugged their test on the George M. Beard farm. Dr. C. C. Talliaferro's test, on the Cora Dixon farm in the NW Section 11, Clark Township, has been

(Continued on Next Page)

# Latest Completion in Flushing-Morristown Pool in Ohio Is Largest Natural Gas Producer

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Jan. 23.—The latest test of Gibson Bradfield and C. A. Hardwick of Barnesville, Ohio, in Section 35, Union Township, Belmont County, is the largest of the new Flushing-Morristown gas pool. It is about 3 miles southwest of Flushing and with an original test in the Cow Run sand, it was drilled deeper to the Maxon sand and from both sands is showing for about 2,000,000 feet a day. The largest well heretofore has been about 1,750,000 feet a day.

Completions in the East improved somewhat during the past week but are still at a low point. Three producers with a total of 32 bbls. initial and five gas wells, and one dry hole made up the total for the week.

### SOUTHEAST OHIO

Southeast Ohio reported two small wells only during the past week. In SW Section 33, Center Township, Monroe County, Norman Thomas and others completed a test on the Thomas farm in the Grit at a depth of 1,955 feet. It is a gas well gauging in the neighborhood of 100,000 feet a day.

In Washington County, Burt and Burt drilled a test on the L. C. Burt farm, Lot 1,081, Palmer Township, in the First Cow Run sand, a depth of only 413 feet. It made a barrel the first day and will probably rate about a half barrel pumper.

#### Drilling in Ohio

Drilling in Southeast Ohio has been gradually decreasing until at the present date there are but 21 wells in an active state of drilling with eight rigs standing for immediate work. Of interest among those drilling is the test in West Township, Columbiana County, where the Alcoma Oil & Gas Co. is drilling on the Levi Simmond farm. Lately, there have been several fair gas strikes in this county.

In Belmont County another test due in soon is the second test of the O. K. Oil & Gas Co. on the Alice Adams farm, Section 29, Union Township. In Richland Township, John Lockary in his test on his own property in the section where oil has been found, Section 25, will soon hit the sand.

Of the eight rigs standing in Southeast Ohio, two are in Coshocton County, where several fair producers have been recently completed. One is for a No. 3 on the M. L. Noland farm, Section 20, Pike Township, by W. E. Stephenson, and the other a third well on the F. H. Donaker farm, by the Preston Oil Co. and in Perry Township. In Clarke Township, Lot 8, the Mehowa Oil & Gas Co. is clearing the ground getting ready for a rig for a test on the Sol Haun farm.

In Washington County the Benedum & Trees test on the E. E. Knowlton farm, Section 10, Independence Township, is now within a hundred feet of the Clinton sand and stands 7,000 feet deep, the deepest test in this section. No announcement has been made as to the final depth of the test but, at this depth, drilling has been very slow, due both to the hardness of the formation which has been lime for some depth, and the heavy equipment.

### WEST VIRGINIA

Two producers were completed in West Virginia during the past week, one of which is making a fair showing. In McClellan district, Doddridge County, the Murphy Oil Co. completed No. 9 on the W. B. Allen farm in the Big Injun sand at a depth of 1,968 feet. Here, the Pittsburgh Coal was placed at 528 feet, and the top of the Big Injun at 1,852 feet. A show of gas, estimated at about 21,000 feet a day, was struck between 1,880 and 1,885 feet. At 1,939-1,949 feet there was additional gas about 46,000 feet a day, and a showing of oil. At 1,959-1,967 feet there was about 50 gallons of oil showing in two hours, along with about 25 gallons of water. With 1,600 feet of fluid in the hole, about 25 bbls. of oil is being bailed off each day.

The other producer is in Calhoun County, on Coal Fork Creek in Sheridan district. It is the second test of the Hope Construction & Refining Co. on the P. F. Mercer farm and was completed in the Salt sand at a depth of 1,995 feet. It is making about 6 bbls. a day naturally with the sand only tapped.

#### Gas Wells

In Calhoun County two other wells were completed, both of them gassers. In Washington district, C. B. Lewis completed a second test on the Louie Hamilton farm in the Injun sand at 1,965 feet and has a fair gas well showing for over 300,000 feet a day. In Sheridan district, J. H. Morrow completed a test on the Fling lease in the Injun sand and it is a very light gasser.

The best well for the week was in Wirt County on the waters of Rock Run in Burning Springs district. It was the second test of Paul Roberts on the Hall and Ackley lease and was completed in the Keener sand. It is showing for about 2,000,000 feet a day.

In Lincoln County the Bulger Gas Co. completed a test on the Samuel van Gundy farm at a depth of 2,397 feet, the Berea sand. It is also a gas well and will make a fair showing.

The one dry hole drilled in the lower eastern fields during the past week was a second test in Wood County where C. S. Reed drilled on his own property, 16 acres, and found the Maxon sand dry. It is located on the waters of Plum Run, Williams district.

#### Drilling in West Virginia

In Church district, Wetzel County, the State Line Oil & Gas Co. is in the fourth sand in its test on the C. W. Kirkhart farm. The Pittsburgh Coal was at 964 feet, and the fourth sand was struck at 3,102 feet and extended to 3,140 feet. There was a show of gas at 3,117-3,132 feet but no test. The test was recently shot with 30 quarts and is being cleaned out preparatory to testing. In the same district, the Manufacturers Light & Heat Co. is down to 1,700 feet in its test on the Caleb B. Freeland farm. In Grant district, active drilling has been resumed in the test of the Shimwell Oil & Gas Co. on the W. J. Price farm. The depth is now 3,062 feet.

A new test starting in Ritchie County is on the John Coyle farm in Murphy district, where the Bode-Stoffle Drilling

Co. recently spudded in. In the same district, Albert Jackson has made good progress and is 2,050 feet deep in his test on the J. W. Heffner farm. In this section, W. A. Bickerstaff is down 1,100 feet in a test on the Morris and Grimm lease.

In Sheridan district, Calhoun County, a new test is starting on the A. T. Yoke farm. W. T. and O. L. Yoke are rigging up at present. Ira Haught and others are also rigging up in this district and on the Alva Elder farm which will be a second test. Roy Waggoner and others are about due in with their second test on the Clat Chenowith farm, same district. Another test due in is in Sherman district where Creed Barker and others are drilling deeper the old No. 1 on the Lloyd Kelley farm, and which has passed 2,010 feet. McCall and others are down 1,850 feet in a test on the William Poling farm and in Lee district F. F. McIntosh is 1,850 feet deep in a test on the S. A. Hays farm.

In Roane County the Reedy Oil & Gas Co. has spudded in and started drilling a test on the M. L. Santee farm in Curtis district which is the only operation active at present.

In Monongalia County, Clay district, on the waters of Dunkard Creek, the Martin Oil & Gas Co. is getting ready to drill to lower sands No. 2 on the N. P. Fetty farm. In Battelle district, the State Line Oil & Gas Co. is repairing casing in its test on the Mary J. Straight farm at a depth of 2,415 feet.

In Cabell County, C. C. Wolfe and others lost the tools at a depth of 3,000 feet in a test on the Calhoun and Justice lease in Guyandotte district. The Huffman Oil & Gas Co. is down 1,260 feet in a test on the Darnell and Nelson lease. The North Pole Ice Co. is making progress in its test on its own property and has reached 800 feet. The Cisco Drilling Co. is drilling at 1,505 feet on the Ed Bull farm. The Guyan Valley Gas Co. is down 2,315 feet in its second test on the C.&O.R.R. Co. lease. In McComas district, D. R. Campbell and others are drilling at 1,560 feet on the Gilbert Holton farm, a test.

In Logan, Wayne and Boone Counties, drilling has been suspended, with several wells incompleted.

### SOUTHWEST PENNSYLVANIA

Operations have all but been suspended in the Southwest Pennsylvania districts, and another week passed without a report of completion. In Harmar Township, Allegheny County, the test of M. C. Rodgers and others on the Grace W. Wolf farm is due in the sand. In Amwell Township, Washington County, the test of the Union Gasoline & Oil Co. on the Paul Lewis farm is making headway. This interesting district has been held back on account of the curtailment demands. The same is true of the Dunkard sand strip in South Franklin Township, which has shown indications of considerable production, all of which would be in excess of the allowable, and remains undrilled.

#### Wildcats

In Virginia, the test of Benedum & Trees on the Clinchfield Coal Co. tract in Russell County is making headway with the tools at a depth in excess of 4,600 feet. In Wise County, trouble has been plentiful in their test on the I. Kaufman farm with a crooked hole, and plenty of shots. The depth is still under 3,000 feet. Enough gas has been found to operate the drilling.

In West Virginia, the Benedum & Trees test on the Pocohontas Coal Co. tract is still down with the tools stuck in the hole and grubbing out the line.

## Central West Fields

(Continued from Preceding Page)

shut down by Davis Basinger. The Interstate Oil Co. plugged its Alvin Franchville test in Clark Township, after drilling to the Mississippi lime.

Pike County—A. E. Davis completed the No. 1 Frank Aurand, in Washington Township, at 1,111 feet, with a production of 750,000 feet. In SW Section 17, same township, H. H. Risher is drilling the No. 1 Luther Boger. In this well a flow of gas was found in the Hightower sand at 810 feet. In the same quarter section, Claude Trussler completed a 2,000,000-foot well at 1,020 feet on the Charles Lucas lease. H. A. Moore is drilling the No. 1 Earl Reed, in the same township. Claude E. Noble is drilling the No. 1 Helen Smith, and A. V. Burden is drilling the No. 2 William Smith, both in the SW Section 17.

Spencer County—The Van Oil Co. is down 630 feet in its sixth well on the G. A. Grass farm in Section 11, Huff Township. The Packard Oil Co. is drilling another well on the Arthur Ray farm, in the same section.

Stark County—Henry A. Joern completed a dry hole in the Trenton limestone on the Lincoln National Life Insurance Co. farm, in the SE Section 35, Davis Township, and the rig is being moved to the Wanda M. Joern farm in the NW Section 36, for another test.

Sullivan County—William H. Wood is drilling on the John L. Bohanon lease in the SE Section 18, Curry Township. In Section 10, Jackson Township, the Jackson Hill Coal Co. is drilling a test on its own land.

Vanderburg County—John L. Drake and others are drilling on the Nos. 3 and 4 John and Mary Effinger, in the NW Section 33, Center Township. In the southwest quarter of this section, Ellis & Young are starting a test on the Evansville Airport land. The Maxwell Petroleum is drilling the No. 3 George Hornby, in the SW Section 33. J. S. Young, Jr., is drilling on land of the Iglehart Milling Co., in the same quarter section. The No. 1 John A. Kissell, drilled by C. M. Root, in the NW Section 4, Center Township, was completed a dry hole at 1,002 feet. The No. 2 Fred Kreiger, drilled by Drake & Young, in the SW Section 28, produced 100 bbls. initially from 898 feet. The Big Four Oil & Gas Co. completed a dry hole at 1,480 feet, in the No. 1 Nettie H. Patterson, in the NE Section 29. The No. 1 W. W. Sipp, in the SW Section 19, Scott Township, is being started by C. J. Weideman. In the SW Section 29, Center Township, C. M. Root is drilling on the E. A. Swope lease. The Maxwell Petroleum Corp. is drilling the No. 1 Helen L. Luhring, in the NW Section 28. Young & Henley completed a 15-bbl. well at 912-30 feet, on the right of way of the C.&E.I. Railroad, in Section 33.

# Gordon Oil Co. Has Best of Five Wells Completed in Central Michigan Field

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., Jan. 21. Five completions were reported from the Central Michigan Field in the past week, the largest producer being the Gordon Oil Co.'s No. 6, 330 feet from the south and east lines of the N. J. Skinner farm, in SE SE NE Section 16, Greendale Township, Midland County, which showed an initial of 600 bbls. from the Dundee formation at a total depth of 3,558 feet. The next best completion was the Thompson Brothers' No. 2-A, 990 feet from the south and west lines of the Ernest Remenschnider farm, NE Section 14, same township, with an initial of 300 bbls. Talbot Oil Co.'s No. 1, 330 feet from the south and east lines of the Tope-Talbot farm, SE SE SW Section 11, same township, had an initial of 100 bbls. The Pure Oil Co.'s No. 1, 2,310 feet from the south line and 990 feet from the west line of the P. Remenschnider farm, in the NE NW SW Section 15, same township, also had an initial of 100 bbls. The same company's No. 3-A on the Roland Harnick north 60 acres, NW NE NE Section 14, produced an initial of 30 bbls.

In Gratiot County, James G. Tiplady, trustee, reports a dry hole in a test 330 feet from the south and east lines of the Henry and Susan Laycock farm, SE SE NW Section 11, Arcadia Township.

In Isabella County, Broomfield Township, the Shell Petroleum Corp. test, 660 feet from the south and west lines of the William Fritz farm, in the center of SW SW Section 13, is reported showing for 500,000 feet at a total depth of 1,385 feet. The Fritz well is located 2 miles southeast of the Broomfield gas pool. While not as productive as the 14 gas wells in the Broomfield Pool, it is considered of importance as showing an extension of the gas bearing formation. Because of the lack of a present market and at this time not considering it expedient to go ahead with a Dundee oil test the well has been temporarily shut down at a depth of 1,385 feet. Later, according to Shell officials, the well may be deepened to the Dundee or Sylvania formation. The Fritz well was reported to have been several feet higher on the gas sand than the No. 1 Nicholson, a mile northeast in Deerfield Township. The Nicholson well showed for 1,000,000 feet, but was deepened to the Dundee and abandoned. The half million-foot production and geological formations of the Shell wildcat indicate probable commercial gas strikes between it and the main gas field, in the opinion of many gas field men in the field.

Shell Petroleum Corp. found the top of the Marshall at 893 feet in a test 660 feet from the north and west lines of the Aubrey Mellinger farm, in the center of NW SW Section 9, North Star Township, Gratiot County, and then deepened to 990 feet without production, and the well showed some water. Whether the well will be drilled deeper or not has not been decided. This company is drilling a test 660 feet from the south and east lines of the J. Covell farm, in the center of SE NW Section 15, Seville Township, also in Gratiot County. This test is about 6 miles northwest of Alma, where 10-inch casing will be set. In the same county, Ralph W. Melhorn is nearing the completion of his test 350 feet from the south line and 970 feet from the east line of the Robert C. Kerr farm, SE NE Section 2, Elba Township, also in Gratiot County.

#### Field Pickups

Almost 30,000 acres of state lands in seven counties have been leased for oil and gas development according to the State Conservation Department. The 41 leases are as follows, by counties: Arenac, 8,212.95 acres; Clare, 441.16 acres; Gladwin, 3,360 acres; Isabella, 1,260 acres; Mason, 80 acres; Midland, 9,365.40 cares and Ogemaw, 6,437.72 acres.

Wellman Oil Co., will probably shoot and possibly may treat its No. 2 on the Rhinehart farm, in Greendale Township, Midland County. C. Fred White and others are given an acid treatment in No. 1, 330 feet from the south and east lines of the W. A. Dennis and others farm, SE SE NW, Section 3, Chippewa Township, Isabella County.

Michigan Gas & Oil Co. shot the well on the Lynch farm in Section 35, Vernon Township, Isabella County, which brought a gas volume of 250,000 feet. The Lynch farm well was drilled several weeks ago but showed no gas to speak of.

While there are numerous wildcat ventures scattered over the state, only a few are being actively operated at the present time. Gratiot County has been in the spotlight as a result of four wildcats in that county.

An important wildcat is being drilled by the Oil Properties Corp., 920 feet from the north and east lines of the Carrie B. McNitt estate, SW NE SE Section 10, Haring Township, Wexford County. On this test after several weeks of difficult labor drive pipe has been landed at 884 feet, establishing what is believed to be a record in Michigan and in other states for the longest string of drive. Fourteen-inch pipe was put down for 348 feet where it was reduced to 10-inch and finally landed at a total depth of 884 feet. Drive pipe in the Isabella and Midland County fields ordinarily is landed from 300 to 400 feet, while in Clare County the drift runs from 500 to 700 feet. The contractors on the McNitt farm test are C. I. Dougherty and F. E. Markee.

In Oceana County the Johnson Oil & Refining Co. is drilling around 1,700 feet on a test 990 feet from the south line and 300 feet from the east line of the James Gilpin farm, SW SE Section 15, Leavitte Township, Varner & Lockwood have resumed operations on the test on the O. S. Flood farm, SW NW Section

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### KENTUCKY

While little drilling activity is shown in the Kentucky fields, the early spring season should bring about much wildcat work over the State. Operators are busy leasing up territory for the coming season's work, as there is an abundance of untested territory. One of the interesting tests now under way far to the northwest corner of the State may mean much for the finding of new pools. According to reports two well-known Kentucky operators, James C. Ellis and Lloyd C. Young, are starting their wildcat venture on the Municipal Airport near Evansville, Ind., and if it proves a commercial producer, will mean that much work will be done on both sides of the Ohio River in both Kentucky and Indiana. Several loads of pipe have been placed on the lease. A road has been constructed from U. S. Highway 41 to the northwest corner of the airport field where the first well has been located. The city of Evansville will receive one-eighth of any oil produced.

The finding of a good well recently in Lee County, in the eastern Kentucky area should bring about much drilling in the vicinity. D. L. Johnson and others brought in last December a 75-bbl. initial producer on the property of the Brandenburg Mining Co., near Heidelberg. This territory was overlooked when Lee County was active many years ago and one of the best producing counties in the State. No. 2 is almost due for completion on the same property. Much leasing has been done and with hopes that the field will cover a large area of undrilled territory. This is one of the good fields in the eastern area of Kentucky.

Recently much lease work has been done in Henderson County, in western Kentucky and the early spring will see some acitvity there, according to reports.

#### Late Kentucky Completions

In Ohio County, Vickers and others' second test, 500 feet from the north line and 200 feet from the west line of the C. C. Westerfield farm, 4 miles southeast of Whitesville, was a dry hole at 620 feet. Petroleum Exploration Co. brought in a light gas well in No. 3, 500 feet from the north line and 900 feet from the east line of the C. M. Farmer 320-acre farm, 2 miles southeast of Whitesville, at a total depth of 517 feet.

In Daviess County, D. J. White and others' No. 1, 1,000 feet from the north line and 200 feet from the west line of the George Tinnel farm, one-half mile southeast of Whitesville, proved a dry hole. Mecca Oil Co.'s No. 8, 100 feet from the north and east lines of the Zula Johnson farm, in the Cane Pool Run, was dry at 720 feet, and the South Penn Oil Co.'s test, 200 feet from the south line and 600 feet from the west line of the Emmett Ewing farm, in the Jones Pool, was a dry hole at 719 feet.

A report from Ashland, Ky., is that the Dokenva Gas Corp., a subsidiary of the Henry L. Doherty interests has purchased 500,000 acres of oil and gas leases in 21 counties in eastern Kentucky, for a reported consideration of $350,000. The belief is the property will be developed as a feeder for the Texas-Oklahoma-Chicago pipe line.

# Conroe Rapidly Building Up Big Potential With Completions Averaging Nearly 15 a Week

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Jan. 23.—The steadily increasing activity in the Conroe Field continued to overshadow interest in field developments in other parts of the Gulf Coast the past week. With a total of 75 rigs running and with between 50 and 60 derricks and locations for other tests, that field has within its confines of a 5 or 6-mile radius nearly as much work going on as in all the rest of the Texas Gulf Coast put together.

Between a dozen and 15 new wells are being completed weekly at Conroe and at this rate the field rapidly is building up a potential daily flush flow ranking among the country's largest pools. With approximately 140 wells producing at the close of the past week having an estimated average flush flow of 2,000 bbls. daily, Conroe has a potential daily output now of at least 280,000 bbls. Within the present limits of the field there are locations, based on present schedules, for approximately 600 wells, which on the average of around 2,000 bbls. each would give the field a daily potential of 1,200,000 bbls. Under the present program of development the 600 wells will have been completed within the next year and a half.

### Another Pipe Line for Conroe

Despite an injunction which one company holds restraining the State Railroad Commission from enforcing proration regulations against its properties, daily production of the Conroe Field is being held around 25,000 bbls. with a present allowable of around 160 bbls. per well on a 20-acre basis. A third pipe line outlet for the field was assured during the week with announcement by the Tide Water Oil Co. that it would lay a line to the Houston Ship Channel, a distance of approximately 40 miles. Tide Water Oil Co. has a gathering system over the Conroe Field and has been a purchaser but has been offering its oil to the Texas Pipe Line Co. for transportation to the coast. Tide Water for several years has owned a site on the Houston Ship Channel, located at Deer Park, adjacent to the refinery and terminal of Shell Petroleum Corp. Plans of the company at this time, however, do not call for the construction of a refinery and terminal on its site.

Fifteen new completions were reported in the Conroe Field the past week and brought several additional new companies into the production picture there, among them being Amerada Petroleum Corp. This company's first well, No. 1 South Texas Development Co., C. A. West Survey, came in flowing 123 bbls. per hour through a three-quarters inch choke from a total depth of 5,125 feet. The well is on the extreme east edge of the present limits of the field and a direct south offset to Humble Oil & Refining Co.'s No. 1 Hirsch, a producer.

Additional completions at Conroe were: Farlyn Oil Co.'s No. 1 Stewart, 90 bbls. hourly, 5,125 feet; Gulf Coast Drilling & Production Co.'s No. 2 Keystone Mills, 92 bbls. hourly, 5,153 feet; Harrison & Abercrombie's No. 2 Alexander, 129 bbls. hourly, 5,094 feet; Houston Oil Co.-Tide Water Oil Co.'s No. 3 Cartwright, 12 bbls. hourly, 5,181 feet; Humble Oil & Refining Co.'s No. 4 Dobbins, 93 bbls. hourly, 5,105 feet; same company's No. 6 Madely, 90 bbls. hourly, 5,169 feet; same company's No. 2-B South Texas Development Co., 106 bbls. hourly, 5,154 feet; Neversuch Oil Co.'s (J. K. Hughes) No. 1 South Texas Development Co., 41 bbls. hourly, 5,125 feet; Standard Oil Co. of Kansas' No. 1 Smith & Ratcliff, 125 bbls. hourly, 5,126 feet; Steinberger, Brown & Wheeler's No. 1 South Texas Development Co., 125 bbls. hourly, 5,080 feet; The Texas Company's No. 11 Moody, 90 bbls. hourly, 5,116 feet; the same company's No. 4 Rhoades, 100 bbls. hourly, 5,115 feet; Tide Water Oil Co.'s Nos. 5 and 6 Lewis, the former 90 bbls. hourly, 5,152 feet, and the latter 55 bbls. hourly, 5,097 feet.

### Wells Still Burning

Standard Oil Co. of Kansas' Nos. 1 and 2 Madeley were still burning out of control Sunday. The first well blew out January 8 while being completed at a total depth of 5,119 feet. It cratered and caught fire. The second well, located only 932 feet south of No. 1, blew out January 17 and cratered. The latter was reaming to set surface casing around 1,200 feet and the blowout is believed to have come from gas from the first well coming through a shallow sand to the second. Unless the holes cave there is not believed much chance of killing the wells.

At this time three crude price postings are effective at Conroe. On January 19, The Texas Company reduced its prices for that oil to a range of 69 cents for 35 to 35.9 gravity oil to 74 cents for 40 gravity oil and above. Tide Water Oil Co., effective the same date, cut its prices to a range of 59 cents to 64 cents, or 10 cents under those of The Texas Company. Humble Oil & Refining Co. the following day posted a schedule ranging from 54 cents to 64 cents. Practically all Conroe crude is 38 and 39 gravity.

Among recent trades at Conroe was the purchase the past week by Tide Water Oil Co. of an undivided half interest in a 400-acre tract in the W. C. Lynch Survey from G. W. Strake. This gives the Tide Water Oil Co., one of the "newcomers" to the Gulf Coast, more than 3,000 acres at Conroe, and makes the company the second largest operator in the field. Skelly Oil Co., another Mid-Continent company, has taken the 16.32-acre John Rhoden tract in the Wilson Strickland Survey from Farlyn Oil Co. On the piece is one drilling well, now down 1,200 feet.

### Effect of Price on Drilling

General reductions in crude prices were among the principal developments in the Gulf Coast during the week. The reductions come at a time when the country's most active wildcat play is under way in this area and what effect the cuts will have on this play remains to be seen. Scores of companies and independent operators from other parts of the country have come into the Gulf Coast the past several months and have been acquiring acreage, blocks and production with a view to building up their potential reserve. Active development of these properties was expected but crude prices now are so low that there is not much inducement for bringing in new production except as a future reserve.

A northward extension of production on the extreme east side of the Markham Field, Matagorda County, was effected by the completion of Powers Production Co.'s No. 1 Meyers, Block 1, William Hadden Survey, which came in flowing 250 bbls. daily through a half-inch choke from sand at a total depth of 3,338 feet. At Batson, Hardin County, Christian and associates opened some new production in a new sand at 2,815-32 feet in their No. 1 Christian, which come in flowing 500 bbls. daily through a three-eighths inch choke with pressure of 280 pounds. Twelve feet of 4½-inch screen was set.

Other coastal completions for the week included four additional good wells at Rabbs Ridge, Humble Oil & Refining Co.'s No. 3 Gubbels, 1,250 bbls., 5,208 feet; Gulf Production Co.'s No. 3 Gubbels, 480 bbls., 5,300 feet, and Humble Oil & Refining Co. and Gulf Production Co.'s joint No. 5 T. R. Booth and No. 10-A F. I. Booth, each good for 50 bbls. hourly, 5,300 feet. At Rabbs Ridge, H. M. Naylor's No. 1 Whitemore, which extends the field a half mile north, is working over again. Offsetting this well to the east, Gulf Production Co. is rigging up for No. 1 Hammerstrom.

### Activity in Other Areas

At Barbers Hill, Humble Oil & Refining Co.'s No. 1 Kirby, semiwildcat on the north side of the Barbers Hill Dome, has been abandoned in salt at 4,005 feet after several months of battling cavities in the cap rock and salt. Derrick and rig have been skidded 200 feet north for a second test in an effort to get through the salt there. Late in the week, D. B. McDaniels was completing his No. 6 Wilburn, located on the east side of the dome.

Republic Production Co. and Houston Oil Co.'s No. 1 Sterne fee, discovery well of the Spurger prospect, eastern Tyler County, is a dry gas well showing 2,020 pounds pressure on tubing and 1,950 pounds on casing. Six feet of 5-inch screen was set in sand at 4,690 feet. This well formerly was completed as a gasser in sand at 4,708 feet but went bad and was deepened to 5,619 feet in water sand and then plugged to the present sand. The operators' second test at Spurger, their No. 1 Kirby-McShane, picked up a sand the past week at 4,598-4,610 feet but in a drill stem test it showed dry. The test now is coring deeper.

At Pierce Junction, T. G. Shaw and associates got a good well in their No. 2 Fitzsimmons, north side of the dome. This well, in 23 feet of sand topped at 3,862 feet, came in flowing 500 bbls. daily but increased to 800 bbls. daily. On the south side of the dome, Rock Drilling Co. (Harvey Smith), set screen in No. 2 Hooks in a sand at approximately 4,550 feet. This well has been deepened from a sand at 3,839 feet, in which it was completed a month ago. Gulf Production Co.'s No. 36 Taylor, in the same vicinity has a sand showing oil at 3,835-44 feet and has cemented 7-inch casing at 3,818 feet.

Northern Harris County continued to draw the attention of lease and royalty buyers and now is the most active play on the Gulf Coast. Extending from the Huffsmith area through Tom Ball and down to the Bammell district thousands of acres have been taken and bidding has run prices to as high as $20 an acre. Humble Oil & Refining Co., Sun Oil Co.

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## Gulf Coast Fields and Wildcats

Week Ending January 21

| Company, farm and location— | Remarks: |
|---|---|
| **RACCOON BEND—AUSTIN COUNTY** | |
| Humble O. & R. Co.'s No. 4 S. E. Helmuth, Wm. Harvey Sur. | Drlg. sandy shale 3,025 ft. |
| Humble O. & R. Co.'s No. 9-A Walton, W. C. White Sur., 150 ft. SW of N cor. of 50-ac. tract and 181 ft. SE parallel to NE line | Derrick. |
| Humble O. & R. Co.'s No. 11 Woodley, Wm. Harvey Sur., 412 ft. out of S cor. of tract | Location. |
| **DAMON MOUND—BRAZORIA COUNTY** | |
| Intercoastal Oil Co.'s No. 10 Wisdom, A. Darst Sur., 440 ft. from NW line, 170 ft. from SW line of tract | Set 60 ft. of 4-in. screen 3,587 ft; flowed at rate of 300 bbls. daily; sanded. |
| A. W. Speed's No. 1 D. F. Bryan, A. Darst Sur., 105 ft. from N line, 65 ft. from W line of lease | S.D. 1,051 ft. |
| Sinclair Prairie Oil Co.'s No. 31-A Bryan, 155 ft. N 45 deg. E of SW cor. of Blk. 28, Masterson Subd., and 140 ft. S 45 deg. E of Elmire Bryan tract in A. Darst Sur. | Rigging. |
| Sinclair Prairie Oil Co.'s No. 10 Masterson (W.O.), A. Darst Sur. | Pulling screen 3,255 ft. |
| Sinclair Prairie Oil Co.'s No. 2 Mock (W.O.), A. Durst Sur. | Comp. pumping 15 bbls. net oil 3,607 ft. |
| H. Wisdom's No. 1 Wisdom, 50 ft. from SE line, 75 ft. from SW line of Blk. 5, Lot A. A. Darst Sur. | S.D. 1,045 ft. |
| **MANVEL—BRAZORIA COUNTY** | |
| Alpha Oil Co.'s No. 1 W. H. Nichols, H. M. Little Sur., 300 ft. W, 300 ft. N of SE cor. of tract | Drlg. gumbo and lime 4,123 ft. |
| R. A. Gamble et al's No. 1 Sherwood, Lot 15, Allison-Richey Subd., H. N. Little Sur. | Drlg. gumbo 600 ft. |
| The Texas Co.'s No. 4 Belcher, Harvey Little Sur., 2,900 ft. S, 42 deg. W, 400 ft. S, 48 deg. E, out of N cor. of lease | Drlg. shale and lime 3,510 ft. |
| **WEST COLUMBIA—BRAZORIA COUNTY** | |
| The Texas Co.'s No. 6 Abrams (W.O.), Geo. Tennille Sur. | Drlg. hard sand and lime 3,026 ft. |
| **BARBERS HILL—CHAMBERS COUNTY** | |
| Humble O. & R. Co.'s No. 1 Kirby, Henry Griffith League, 301 ft. from S line, 100 ft. from E line of lease | Salt 3,935 ft; abd. |
| Humble O. & R. Co.'s No. 2 Kirby, Henry Griffith League, 100 ft. W of E line of lease and 200 ft. N of No. 1 | Rigging up. |
| Mills Bennett Prod. Co.'s No. 1-C Gulf fee, Wm. Bloodgood Sur., 150 ft. N of Gulf's No. 1 Fisher fee | Coring sand 4,795 ft. |
| D. B. McDaniels' No. 6 Wilburn, Henry Griffith League, 240 ft. W of No. 5 | Set 29 ft. of 5 9/16-in. screen 4,277 ft; swabbing. |
| Sinclair Prairie Oil Co.'s No. 2 Smith (W.O.), W. D. Smith Sur., 30 ft. from N line, 50 ft. from E line of 30-ac. tract | Drlg. sandy shale 6,284 ft. |
| Sinclair Prairie Oil Co.'s No. 13 Wilburn, Henry Griffith League, 150 ft. W of No. 11 | Set 83 ft. 5 in. of 5-in. screen 4,307 ft; comp. 1,400 bbls.; 300 lbs.; ½-in. choke. |

(Continued on Page 121)

Reproduction of the photomicrograph above shows the inter-locking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent they give Barrett Pipe Line Enamels unusual tensile strength and toughness.

*For pipe of large diameter The Barrett Company will furnish equipment required to revolve pipe and spread enamel.*

# Longer Life for Light-Wall Pipe

Light-wall pipe has many advantages but, like any other metal pipe, it is subject to the effects of soil corrosion when laid underground. Longer life and lower operating costs can be engineered into the line through the application of effective pipe line coatings.

Barrett Pipe Line Enamels and Barrett's broad experience and application technology plus your own knowledge of corrosion conditions along the right of way will assure lasting economies—low first cost and low cost per year of service. 'Phone, wire or write

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Barrett Specification
**PIPE LINE ENAMELS**

# Hobbs Pool Allowable Raised; Stanolind Gets Well Making 2,462 Bbls. Through Tubing

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Jan. 23.—The allowable outlet of the Hobbs Pool was increased on January 16 from 21,306 bbls. to 30,334 bbls. daily. The Stanolind Oil & Gas Co.'s No. 11 State gauged 2,462 bbls. daily through the tubing. No locations were announced. The Continental Oil Co.'s No. 1-B Sholes, in the Jal area, had a blowout at 3,083 feet and gauged 4,000,000 feet of gas. Secretary of the Interior Wilbur has set February 1 as date for hearing of protests on proposed rule of the department for the payment of royalty on 100 per cent of tankage capacity tables.

Contracts for completion of the No. 1 Anthes test in northeastern Colorado were signed by three major companies. Drilling is to be resumed in the South Florence Field in the spring.

Wyoming reported no completions and no new wells starting. The Continental Oil Co. has an important test on the Frannie Dome ready to drill into the objective.

One well was drilled into the sand in the Cut Bank Field in Montana and will make an average producer. Several others are near-completions.

## NEW MEXICO

### Lea County

The Stanolind Oil & Gas Co.'s No. 11 State, C NE SE Section 4-19-38, which was reported a completion and waiting for gauging last week, was gauged for proration and given a potential of 2,462 bbls. daily. It made that quantity with 1,970,000 feet of gas through the 2½-inch tubing at 4,106 feet. In the open flow test it produced at the rate of 1,296 bbls. of oil and 2,100,000 feet of gas on a short test and then stopped flowing. Total depth is 4,185 feet. It is an inside well in the southeastern part of the field.

The Continental Oil Co.'s No. 7-B State, C SW NE Section 33-18-38, was bailing after cementing the 7-inch at 3,970 feet when bailer was lost and fishing is in progress. The Stanolind Oil & Gas Co.'s No. 26 Turner, C SE SW Section 34-18-38, is bottomed at 4,000 feet and waiting after cementing the 8⅝-inch at 3,990 feet with 150 sacks. Same company's No. 26 Thorpe, C SE NW Section 10-19-38, is drilling at 3,456 feet in anhydrite and lime. The Humble Oil & Refining Co.'s No. 3-B Bowers, SW SE SE Section 20-18-38, is drilling at 3,405 feet in anhydrite. The Gypsy Oil Co.'s No. 2 Boon Hardin, SW SE SE Section 18-18-38, cemented the 8⅝-inch at 4,022 feet with 500 sacks and is waiting. The Tidal Oil Co.'s No. 4 Hardin, SW NE NE Section 19-18-38, is drilling at 2,840 feet in anhydrite. The Texas Company's No. 4-C State, NW cor. NE Section 25-18-37, is rigging up rotary after cementing the 12½-inch at 218 feet.

In the Jal area, the Continental Oil Co.'s No. 1-B Sholes, C SW NW Section 13-25-36, is bottomed at 3,155 feet with the 9⅝-inch at 2,844 feet, and bailing to test. It had a show of oil at 2,925-39 feet, an increase in gas at 2,940 feet. At 3,082-83 feet there was another increase in gas and the hole was cleared of mud. The flow gauged 4,300,000 feet per day. At 3,121-23 feet it had a show of oil and gas. Coring started at 3,103 feet. It is an offset on the east to the Humble's No. 1 Koonce, which was completed in 1930 at 3,325 feet with an average initial production of 139 bbls. per day through the 3-inch stem.

In the Eunice area, the Atlantic Oil Producing Co.'s No. 1-B State, C NW SE Section 8-21-36, is still a location.

In the Lea area, The Texas Company's No. 1-B Lynch, C SW NW Section 34-20-34, bottomed the salt at 3,350 feet, topped the brown lime at 3,360 feet and is drilling at 3,540 feet, and its No. 2-A Lynch, C SE SE Section 34-20-34, is drilling at 3,485 feet in lime. It bottomed the salt at 3,365 feet and topped the lime at 3,395 feet.

In the Lovington area, the Western Drilling Co.'s No. 1 State, NE cor. SE Section 13-17-36, is drilling at 5,120 feet in gray lime.

### Eddy County

William Dooley, secretary-treasurer of the New Mexico Oil Men's Protective Association, announced the personnel of the advisory board, with the exception of two vacancies remaining to be filled, as follows:

V. S. Welch and M. E. Baish, Artesia; E. P. Hart and W. A. Moore, Carlsbad; J. S. Eaves, Lovington; Edwin Wahlstrom, D. D. Bodie, Hobbs; S. P. Hannifin, A. N. Etz, Harold Hurd, J. M. Hervey, Col. J. D. Atwood, F. E. Levers and F. G. Keyes, Roswell; Dr. H. E. Elliott, Fort Sumner; Perry Coon, Gallup; H. B. Wright, Las Cruces; Theodore N. Espe, L. E. Elliott, Santa Fe; J. P. Cusack, Wichita, Kans.; E. G. Allen, Houston, Tex.; J. C. Creeden, Wink, Tex.; J. S. Noland, Midland, Tex.; Keith E. Crouse, Los Angeles, Calif.

R. Spearow and others' No. 1 McClellan, SW NW NE Section 22-22-23, Indian Creek, west of Carlsbad, is drilling at 1,088 feet in brown lime with 400 feet of water in the hole from 890 feet. Flynn, Welch & Yates' No. 65 State, NE SE SE Section 30-18-28, Artesia district, is drilling at 1,400 feet in gypsum and lime. Leonard-Barnsdall's No. 1 Dodd, SW SE SW Section 22-17-29, Jackson district, is drilling at 560 feet in salt. The 10-inch was set at 219 feet and the salt was topped at 235 feet. at 100-05 feet water rose 40 feet in the hole and could not be bailed down. C. H. Lockhart and others' No. 2 Burch, C SW SW Section 7-17-30, Maljamar district, is building road. Isaac Hanan and others' No. 1 State, NW cor. Section 32-18-31, south of the Jackson Pool, is rigging up cable tools.

### De Baca County

The Landowners Oil Co.'s No. 1 State, SW cor. NE Section 16-1s-27, Buffalo Creek, has resumed and is making hole at 5,355 feet in lime.

### Bernalillo County

The Norins Realty Co., Inc.'s No. 1 Pajarito grant, NW cor. NE Section 22-9n-1e, southwest of Albuquerque, is drilling at 3,540 feet in valley fill.

### Guadalupe County

The Anton Chico Development Co., Ltd.'s No. 1 Anton Chico grant, NE cor. SW Section 20-9n-17, set the 12½-inch and shut down at 1,200 feet in sand.

### San Juan County

The Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor. Section 20-28-10, Kutz Canon district, is shut down at 4,020 (cor.) feet, until weather moderates. The thermometer has not been above zero since Christmas. Fred Barrett's No. 1 Hart, Section 11-29-11, Fulcher Basin, is hauling in coal to resume at 310 feet. A statement used last week as a report that the California Corp. (Isaac Sharp and others) had acquired the Aztec Natural Gas Co.'s wells and pipe line, is still unconfirmed. President Frank M. Burt denies that a deal has been made. The Aztec Producers, Inc., of Los Angeles, Calif., is reported to have made a location in the NW SE Section 16-29-11, southwest of the Oswell wells. This is a separate and untested structure. It is stated that drilling will start as soon as weather conditions permit.

## COLORADO

Operators on the public domain have been advised that Dr. Ray Lyman Wilbur, Secretary of the Interior, will begin a hearing on Monday, February 1, on the interpretation of the terms "production and oil produced" as used in the mineral leasing act. Last fall he issued an order effective October 1 requiring oil producers on the public domain to pay royalties on 100 per cent of the oil recovered on government land instead of the 97 and 98 per cent (after allowances for basic sediment) which has been the rule for years. Protests were filed by the Rocky Mountain Oil and Gas Association, the Mid-Continent Oil and Gas Association, the American Petroleum Institute, and others and a hearing was requested. The order, thereupon, was suspended temporarily pending a hearing. The ordr affected all production on government leases on which there are no oil purchase contracts in effect. Salt Creek and Cat Creek are excluded for the present on account of such contracts, but when they expire within the next two or three years, the rule will prevail if finally put into effect. Operators contend that the new rule will require the setting up of two different accounting systems and will involve needless expense.

### Weld County

The Ramsey Petroleum Co.'s No. 1 St. Anthony, SW NE SE Section 15-7n-59, New Raymer-Buckingham district, cemented off the Dakota at a total depth of 6,791 feet, including a joint of the 5⅛-inch pipe. The pipe was then ripped off at 6,720 feet, at the base of the Muddy, and the remainder of the string was pulled. Preparations are under way for completing the well as a gasser in the Muddy and bailing it in will begin within the next day or two. W. R. Ramsey is in Colorado. He says he is out here to wind up the St. Anthony well and to look into plans for additional drilling, the construction of a gasoline plant at the well and for the marketing of the dry gas. These plans have not yet progressed to the point where any definite announcement can be made. It is understood, however, that the drilling of two additional wells is contemplated.

The contracts were signed the past week for the completion of the Tulsa-Fort Morgan Petroleum Co.'s No. 1 Anthes, C NE NE Section 24-8n-59, 5 miles to the north of the Ramsey well. It was drilled to 3,318 feet with cable tools. It will be completed with rotary as a joint operation of the Continental Oil Co., the California Co., a subsidiary of the Standard Oil Co. of California, and the Centennial Plains Oil Co. Arthur Bosworth, of Bosworth, Chanute, Loughridge & Co., of Denver, is president of Centennial Plains, and S. C. Munos, of New York, who brought about the development of the Rattlesnake Pool in northwestern New Mexico, is vice president. W. L. Christiana, chief geologist for Continental Oil Co. before the merger with Marland Oil Co., assembled the acreage in that district held by the Centennial Plains company. Contract for a turnkey job for the Anthes well was let to the Mead Brothers Drilling Co., of Oklahoma, and five carloads of equipment is due to arrive within the next day or two. The water line to the Anthes well has been buried in preparation for the resumption of drilling. Present plans provide for the use of Diesel engines. It is possible that a gas line will be laid to the well from the Ramsey gasser. All three of the companies joining in the completion of this test have blocks in that district in addition to the acreage received from the Tulsa-Fort Morgan company. This operation will be carried as the Continental Oil Co. and others' No. 1 Anthes.

### Routt County

The Mid-Colorado Petroleum Co.'s No. 1 Omholt, NE cor. SE Section 29-4n-87, Fish Creek, which recently developed a flow of 1,000,000 to 1,500,000 feet of gas in the Frontier at 1,917 feet, has been deepened to 2,200 feet and the gas increased from the second sand to close to 4,000,000 feet per day.

### Rio Blanco County

The California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is drilling at 6,859 feet.

### Fremont County

The Vogel-Raddatz Corp., which has a number of producers in the South Florence extension, has authorized the drilling of two wells. Work will start early in April or May.

## WYOMING

### Park County

In spite of a prevailing blizzard with the temperature registering 12 degrees below zero, the Continental Oil Co.'s No. 1 Northern Pacific, SE SW NE Section 23-58-98, is continuing operations. It is bailing to test shutoff after cementing the 8⅝-inch at 3,309 feet on top of the Embar formation. It is a little more than a half mile north of the nearest producer and appears to be running high.

### Washakie County

The Bales Oil Trust's No. 1 Brome, NE NW Section 31-48-90, Hidden Dome, which came in as a small producer last fall in the Frontier at a total depth of 1,444 feet, has been placed on the pump and made 60 bbls. in 18 hours. The oil is very high grade, testing 68 degrees gravity. It is planned to do some additional drilling and erect a skimming plant at Worland. The well is a diagonal offset to a test drilled by the Ohio Oil Co. several years ago which had some oil in the Frontier, but which soon was exhausted.

### Park County

V. M. Kirk, of Frannie, and associates, are reported to have acquired from Cranfill-Reynolds, Inc., the holdings of the Cody Petroleum Co. in the Oregon Basin Field. Cody Petroleum was one of the first operators in the feild and drilled several producers in the saddle between the north and south dome. Some of these tests at last reports were showing water. The company has considerable equipment. B. E. Parrish and Paul R. Greever, of

Cody, are reported interested with Mr. Kirk in the deal.

**Fremont County**

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is bottomed at 4,616 feet and preparing to run packer and test a show of gas. It cored the Dakota and decided to test without unloading mud.

**Carbon County**

The Ohio Oil Co.'s No. 1 Hanawka, SW NW NE Section 34-23-79, Allen's Lake, is drilling at 1,267 feet and is estimated to be 300 feet above the objective gas sand.

**Natrona County**

The Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, is preparing to cement the 6⅝-inch at 1,825 feet. Pipe was run to bottom before suspending for the holidays. Hole is believed to be near the top of the Muddy. Leo B. Murphy and others' No. 1, SE NW Section 29-33-80, west of the No. 1 Trewitt, obtained a water supply and started drilling. It is making hole at 460 feet.

**Converse County**

The Continental Oil Co.'s No. 30 Converse Sheep, SW SE SE Section 4-33-76, Big Muddy, is mudding at a total depth of 4,767 feet to kill water in second bench of the Sundance and continue drilling to the objective, the lower Sundance.

**Platte County**

T. R. Oberman's No. 1 Diamond Ranch, NW SE Section 30-21-68, west of Chugwater, has tools out of the hole and is drilling ahead at 175 feet.

**Niobrara County**

The Interstate Oil & Refining Co.'s No. 1 Morrell, SW cor. SE Section 2-39-61, West Mule Creek, is shut down at 2,200 feet.

**Crook County**

McWelthy and others' No. 1, Section 1-49-66, 7 miles north of Thornton, is resuming at 530 feet after moving a No. 28 Star over hole to replace a small Sparta rig.

**MONTANA**

**Carbon County**

The Ohio Oil Co.'s No. 11 Bowman, C SE NE Section 4-7s-21, Dry Creek, is swabbing to test the Dakota and upper Lakota, and its No. 9 Souders, C NE SW Section 2-7s-21, is drilling at 4,506 feet in shale. The Carbon Oil & Gas Co.'s No. 1 McMinn, NW SW SW Section 7-7s-22, is shut down at 5,551 feet for adjusters. The rotary rig, which belongs to Charles E. Orchard, was burned when the well began to flow and the gas caught fire. It carried $20,000 insurance.

L. N. Hagood, of Casper, has been granted a prospecting permit on 320 acres in S half Section 33-6s-21, on the northwestern extension of Dry Creek. The tract offsets the acreage upon which the Ohio Oil Co.'s No. 11 Bowman is located. Several offers to develop the permit have been received, but no deal has been closed.

**Glacier County**

R. C. Tarrant's No. 1 Haglund, Sr., SW cor. NW Section 13-34-6w, Cut Bank Field, a north offset to his No. 1 Haglund which came in last year for 85 bbls. initial, drilled into the sand at 2,838-80 feet and oil rose 1,800 feet in the hole. It is swabbing and gives every indication of being a good producer. Tarrant's No. 1 Britton, NE cor. SE Section 14-34-6w, a west offset to No. 1 Haglund, which was found to have 1,700 feet of oil in the hole at a total depth of 2,896 feet upon resuming after the holidays, continues to swab in an effort to bring in the oil and looks as if it will make a producer. When swabbing first started it made 60 bbls. in six hours. B. E. Adams and others' No. 1 Britton, SE cor. NE Section 14-34-6w, an offset to the wells mentioned above, has drilled by lost tools, cemented the 8¼-inch at 2,795 feet and will be an early completion.

L. R. Hannah and others' No. 1 Britton, SE SW SE Section 14-34-6w, is fishing at 2,836 feet. The Santa Rita Oil & Gas Co.'s No. 1 Jackson, C NW SW Section 25-34-6w, began spudding January 14, and Hannah-Porter Co.'s No. 1 Britton, NW NE NE Section 23-34-6w, is still shut down after spudding. W. M. Fulton and others' No. 1 Blackfeet, NE cor. Section 16-34-6w, is moving in and building rig. The Dakota-Montana Oil Co.'s No. 1 Drumheller, SW SE NE Section 3-34-6w, topped the Kootenai at 2,305 feet and is drilling at 2,355 feet. The Alberta-Pacific Consolidated Oil Co.'s No. 1 Kiesel, NE cor. NW Section 11-34-6w, is shut down at 2,500 feet to overhaul engine, and its No. 1 Matson, NE SE NW Section 14-34-6w, is drilling at 2,640 feet. R. C. Tarrant's No. 1 Miller, C NE NE Section 24-34-6w, is shut down at 1,250 feet, and his No. 1 McLellan, C SE SW Section 7-34-6w, is standardizing at 1,465 feet.

**WASHINGTON**

Mordello L. Vincent and others' No. 1 Rosalie, Section 9-28-13w, Prairie Forks, Clallam County, has resumed drilling at 1,220 feet after being shut down for the holidays. The Ives Oil & Gas Co.'s No. 2, Section 21-40-4, Whatcom County, is shut down at 1,000 feet. The Ohio Oil Co.'s No. 1-A Robinson, Section 5-17-9w, Grays Harbor County, has completed abandoning at a total depth of 6,725 feet.

**OREGON**

The Clarno Basin Oil & Gas Co.'s No. 1 Antelope, south of The Dalles, Wheeler County, is reported to have blown the mud and water out of the hole when operations were resumed at 2,780 feet.

# Drilling Activity Is Increasing in Canada With Numerous Tests Planned for the Future

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Jan. 21. — In South Turner Valley, Mar-Jon Freehold's No. 1, LSD 9, Section 28-18-2w5, is redrilling close to the top of the lime at 5,400 feet, and sidetracking lost tools. The old bottom was around 5,469 feet, about 50 feet in the lime. The test is in the far south end of the field, the nearest producer being Merland Oil Co.'s No. 1 in Section 27, which is at present the best individual producer in the field.

Farther north in the same section, W. Fay Becker syndicate's No. 2 Anaconda, LSD 15, is making new hole after shutting off surface water around 200 feet.

A mile south of these tests Union Drilling Co.'s No. 1, LSD 8, Section 21-18-2w5, is reported planning to drill through the winter. This is the first test to be drilled south of the Big Hill and will determine whether or not the producing area of Turner Valley extends this far to the south.

In the Mercury area, Associated Royalties' No. 1, LSD 9, Section 5-19-2w5, is making new hole below 3,320 feet after cementing at 3,295 feet. The test is reported to have encountered gas in several pays, with an estimated total of 3,000,000 feet a day.

**Central Turner Valley**

In the Central Turner Valley, Bow Oils' No. 1, LSD 14, Section 12-20-3w5, has finished pulling lost drill rods and cleaning hole. The drillers are now endeavoring to sidetrack the old tools in the hole. This well was formerly the Illinois-Alberta Oils' No. 1 producer. Cleaning out has already resulted in some recovery of wet gas production.

**North Turner Valley**

In the North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, is reported making new hole below 4,110 feet. The test has about 1,800 feet to go to reach the producing horizon encountered in Model's No. 1, about half a mile to the south.

With six tests actively drilling, the Turner Valley Field is relatively quiet. There are, however, a number of activities expected to resume in the spring; and a number of other tests which may be taken over and completed by new companies.

The regulation of the Alberta government prohibiting the drilling of new tests into the Madison limestone increases the prospect of unfinished tests being taken over and completed where they are advantageously located. Of the tests now active, Model's No. 2; Becker Syndicate's No. 1, and Associated Royalties' No. 1 were all unfinished tests taken over by new interests.

The most interesting prospect for spring operations is McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5. This deep test is standing at 7,755 feet and as soon as weather moderates a number of small gas and oil shows encountered below the lime will be tested. There is a possibility also of deeper drilling. In the north, United Oils' No. 4, LSD 2, Section 24-20-3w5, will redrill below 5,396 feet to recover a light crude production previously met in the Dalhousie sand.

If Associated Royalties' No. 1, LSD 9, Section 5-19-2w5, gets large production, Miracle Oils' No. 2, LSD 16, same section, is likely to be carired farther. This test has been standing at 5,558 feet. It was started some years ago as Askalta Oils' No. 1 and was taken over by Miracle Oils, Ltd.

A favorable outcome to tests now drilling in the far south end of the field may be completion of two wells which have been standing for nearly a year. A. H. Mayland's No. 1, LSD 5, Section 34-18-2w5, originally started by Rand Petroleums, Ltd., and Vanberta Oils, Ltd., was taken over last year by A. H. Mayland, deepened from 65 to 300 feet, and has since been shut down. Livingston Syndicate's No. 1, same LSD, has been standing cemented for nearly a year at 2,160 feet. These locations are about a half mile north of Merland Oil Co.'s No. 1 producer.

Farther north, Lundy Petroleums' No. 1, LSD 4, Section 3-19-2w5, has been standing at 100 feet. It is somewhat east of Section 4-19-2w5, where the Mercury producers are located. The latter has proven one of the most prolific sections of the field.

There are numerous unfinished tests in North Turner Valley, some of them carried to considerable depth.

**Southern Alberta Operations**

On the Keho Lake structure, northwest of Lethbridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, is reported making production test following a shot in the Benton shales at 3,770 feet.

On the Twin River structure, southeast of Lethbridge, Nordon-Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, is reported resuming after a shutdown since Christmas. Considerable fuel oil has been trucked to the site to supplement the oil from Parco's No. 1 Twin River. The test has been standing cemented at 261 feet.

**Athabaska Test Resuming**

In the Athabaska district, northern Alberta, Athadome Oils' No. 2, LSD 3, Section 15-66-23w4, which has been standing around 600 feet, has developed caving troubles and will be cemented before drilling deeper.

**Cut Bank Operations**

On the Montana side, Alberta Pacific Consolidated Oils' No. 1 Matson, SE NW Section 14-34-6w, is reported drilling below 2,575 feet. Alberta Pacific's No. 1 Kiesel, Section 11-34-6w, is drilling below 2,400 feet. Prospects for these tests, financed by Calgary capital, are more encouraging since Roy Tarrant's No. 1 Britton, NE NE SE Section 14-34-6w, after giving every indication of being a duster, turned into a producer. The well was left standing over the holidays waiting for a shot after bottoming at 2,916 feet; and on resuming was found with 1,800 feet of oil, a swabbing test showing 60 bbls. in six hours. The well is being put on the pump without a shot. The sand was between 2,866 and 2,896 feet. Tarrant's No. 1 Haglund, Sr., SW SW NW Section 13-34-6w, is fishing at 2,846 feet with 150 feet of oil in the hole. Hannah's No. 1 Britton, SE SW SE Section 14-34-6w, is fishing at 2,836 feet; and R. E. Adams' No. 1 Britton, SE SE NE Section 14-34-6w, is fishing at 2,730 feet. The field has three other tests drilling, one spudding, two rigged and one making camp.

**Alberta Foothills**

On the Monarch structure west of Olds, in the Alberta foothills, Cartier Majestic's No. 1, LSD 3, Section 36-31-7w5, is fishing around 1,460 feet.

In the same general area, Hunter Valley Oil Co.'s No. 1, Township 31-10w5, is reported starting work on derrick.

On the Moose Mountain structure, Graystone Petroleum Consolidated's No. 2 Signal Hill, LSD 9, Section 34-23-5w5, is expected to resume work this spring. The test has been standing at 4,224 feet after encountering some good shows of light crude, and is thought close to the potential producing horizon of the Dalhousie sand.

It is reported that Fuego Oil Co., Ltd., may shortly resume operations in the Acadia Valley. Fuego's No. 1, in LSD 16, Section 34-25-4w4, has been standing since 1930 at 3,182 feet, after getting the top of the Paleozoic lime at 3,100 feet.

**British Columbia Test**

In the Kelowna district, British Columbia, Okanagan Oil & Gas Co.'s No. 1, Section 2-26-Osoyoos Survey, has resumed operations after the holiday shutdown and is reported making new hole below 2,620 feet. The drill has been working in black and later in gray carbonaceous shales of the lower Cretaceous formation. Last fall casing was run to about 2,500 feet to shut off water which filled the hole. A little water has since been encountered, and casing will likely be lowered when 2,700 feet is reached to overcome this. Some oil and gas shows indicated below 2,500 feet failed to develop commercial production.

In Raleigh Township, Kent County, Producers Gas Corp.'s No. 1, Cecil Chinnick farm, Lot 17, Concession 8, is reported drilling at 1,470 feet, and should be finished to the oil sand next week. F. H. Stover & Son's No. 1, Earl Flook farm, Lot 19, Concession 8, has been put on the pump after cleaning out. After getting rid of accumulated water, both oil and gas production increased, and a 25-bbl. pumper is looked for. The oil is a 48 degree product.

# Operators in California Rather Pessimistic About Maintaining Prices; Many Fail to Co-operate

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Jan. 21.—Crude oil prices in California remained unchanged in the face of a 1-cent per gallon reduction in gasoline effected in Southern California territory early in the week and, while strenuous attempts are being made to maintain the existing price structure, the ultimate outcome is still problematical. The situation is rather complex due to a number of varying factors and the pendulum may consequently swing in either direction. Competition in Southern California territory became a little more keen during the past week due to lower consumption resulting from continual rains. Up in the Pacific Northwest gasoline prices are still subnormal and consequently California refiners are marketing at a loss of approximately 1 cent per gallon.

Those in close touch with prevailing conditions in California are inclined to be somewhat pessimistic despite the attempt to peg prices at their present level. Shipments to the Atlantic Seaboard for domestic consumption may ultimately be the dominating factor in the California situation, particularly if any considerable quantity is moved and the net back predicated on eastern prices. Due to price recessions in the Mid-Continent and Gulf Coast area, California marketers are naturally reluctant to make any large commitments based on an eastern net back. As a consequence, shipments to the East Coast may reflect a sharp decline, although it is possible that conditions may be rectified later in the year. It is quite obvious, however, that there is no profit in moving California gasoline to the Atlantic Seaboard as long as the disparity exists between California crude oil prices and those existing east of the Rockies.

An attempt made earlier this month to equitably allocate spot crude oil proved fruitless and definite action was postponed until next week. In the meantime, a committee will attempt to work out a detailed program in a final effort to prevent a general breakdown. Marketers are particularly concerned with the curtailment program because they are afraid that if the price structure goes the curtailment program will go with it and result in complete demoralization. Major companies have inferred that they will operate on their own production exclusively if conditions get beyond control.

### Try to Allocate Spot Oil

The outcome of the executive committee meeting to be held next week in an effort to allocate spot oil may be of far-reaching importance because if the large buyers of crude oil are unable to arrive at an equitable distribution of production this may result in drastic steps. The chief problem confronting California marketers at present is the necessity of conserving cash resources. This cannot be done in the face of existing prices and may ultimately lead to a reduction in the posted price of crude oil if the present purchase obligations of large companies are not immediately relieved by a reduction in production on the part of independent operators.

Three fields in the state at present are directly responsible for most of the overproduction and there does not seem to be any inclination on the part of operators to alleviate conditions. These three fields are Kettleman Hills, where in view of the crisis confronting the industry there is little or no excuse for overproduction, Long Beach and Huntington Beach.

### San Miguelito

The Continental Oil Co. has started building a road to the location selected for No. 2 Grubb, its second well in the San Miguelito Field of Ventura County, but it should be another several weeks before the rig builders are on the job. The topography in this field is badly broken up and the rugged condition of the field presents numerous obstacles. The Chanslor-Canfield Midway Oil Co. has been building a road for several weeks preparatory to starting work on No. 3-A Hobson in this field but still has some little distance to go before completion of preliminary work. Due to the steep slopes of the hills in this field, operators are continually facing the possibility of earth slides.

The Honolulu Consolidated is making good footage with No. 1 Valenzuela in this field but due to the depth to which it will be obliged to go for production, this well will probably not be completed until some time during March. No. 1 Valenzuela is located approximately 3,000 feet west and a little south of the Continental's No. 1 Grubb, which, several months after completion, is still flowing 820 bbls. of 30.6 gravity oil per day from 7,152 feet. The Chanslor-Canfield Midway Oil Co.'s No. 2-A Hobson is the deepest well to be drilled in the San Miguelito Field up to the present time. During the course of work a few years ago it was carried down to 10,030 feet but was subsequently plugged back and finished in the Hobson zone pumping 150 bbls. per day. The lower part of this hole showed a substantial deviation from the vertical, which caused the bit to drill through a fault zone defining the limits of production on the north flank. This fault parallels the axis of the structure as far as can be determined at present.

### Ventura Avenue

With three wells drilling ahead in the oil sand in the Ventura Avenue Field at present, we may anticipate the probable completion of two of them within the next 30 days. All three of these potential producers are being drilled by the Associated Oil Co. The General Petroleum Co. has just passed the 5,170-foot level in No. 15-A Barnard, a new well which is being drilled with the deep 57 zone as its objective. This lower horizon is encountered around the 8,700-foot level with the result that it will be another three months or so before No. 15-A Barnard is in a position to make a bid for production. In the Elwood Field of Santa Barbara County, the Barnsdall has temporarily suspended drilling operations on No. 12 Bell and No. 9 on State tideland permit No. 88. The former has been plugged back from 3,518 feet to 3,288 feet, while the latter has been plugged back from 3,505 feet to 3,305 feet.

The Elwood Field, like Kettleman Hills, has been the source of almost constant litigation since the discovery of commercial production. Within the past week additional action has been instituted against Mr. and Mrs. Silsby Spalding and the Pacific Western Oil Co. This suit revives litigation which went to trial a little over a year ago and in which the same plaintiffs, the heirs of Nicholas A. Den, were nonsuited. The suit filed last week is another of the so-called tideland suits that have resulted from development of tideland property along Santa Barbara County's coast line.

In the Santa Barbara Mesa Field, the Pacific Gulf Oil Co. has suspended production activities on No. 1 Rogers, following the well's failure to show commercial production on a pumping test at 2,157 feet. On Santa Rosa Island, which, incidentally, is a part of Santa Barbara County, the Standard is rotating ahead in a wildcat at 6,120 feet without any showings of importance logged to date.

### Reconstruction Work

Rig builders have been quite active in Los Angeles Basin Fields during the past week rebuilding a number of the rigs blown down in the wind storm which visited Southern California January 10. In the Huntington Beach Field, the Wilshire Oil Co. has recompleted No. 5 Townsite after reconditioning the hole and the well has been returned to production pumping 315 bbls. of relatively clean 25.4 gravity oil per day from 4,367 feet. Due to mechanical trouble, the Wilshire has abandoned No. 6 Huntington and will spud in an offset to be designated as No. 6-A. In addition to drilling this new well, the company is building a new rig over well No. 1 preparatory to a reconditioning job. There are three or four other reconditioning jobs under way in the Huntington Beach Field at the present time, although as a whole work in this field is relatively limited in extent. In the Inglewood Field, the Baldwin Hills Syndicate has recemented No. 1 Sentous following a wet job on the 8⅝-inch at 3,990 feet. The Baldwin Oil Co. has been consistently swabbing its No. 9 in this field but the result has been negative to date.

### Rosecrans

The Barnsdall Oil Co. has started making new hole in No. 5-A Rosecrans, which the company is carrying to the deep Gordon zone in the Rosecrans Field. This well, a former upper zone producer, is being deepened to approximately the 6,000-foot level in order to determine the possibility of developing commercial production in a lower zone found partially productive in No. 2 Trust, an edge well which the Barnsdall completed several weeks ago. The outcome of work on No. 5-A Rosecrans will undoubtedly be watched with considerable interest because a check of early work in the field reveals an excellent possibility of developing commercial production on top of the structure. In the Richfield district, the Forward Petroleum Co. and Otis Hoyt are building rigs for early work. The Texas Company is rebuilding the rig on No. 1 Steiner, an offset to the Forward Petroleum Co.'s No. 2 Davenport, and will deepen the hole to meet offset requirements. In the Seal Beach Field, the Standard is drilling ahead in No. 20 San Gabriel at 5,700 feet. This well, a steady producer from the Wassem zone, is being deepened to the McGrath zone, expected to be topped at approximately 6,000 feet. The Republic Petroleum has finished building a new rig over No. 3 Childs in the Dominguez Field and will install rotary drilling equipment within the next few days. This well, originally drilled by the Shell Oil Co. and abandoned as uncommercially productive at 7,643 feet, will be plugged back by stages and an attempt made to develop clean production around the 4,000-foot level. In the West Coyote Field, the Standard should successfully complete No. 112 Murphy Coyote in the near future, as this well is rotating ahead in oil sand at 6,580 feet at the present time. The company is grading location for No. 53 Emery but this well will probably not be spudded in until after the completion of No. 112 Murphy. The Standard has shut in most of its pumping wells in the West Coyote Field and has been meeting its allowable daily production for the past several months by producing a small number of wells in the deep 99 zone.

### Lost Hills-Belridge

The Associated Oil Co. is making normal footage in No. 1 Williamson, a deep test which the company is drilling jointly with the Richfield Oil Co., and this exploratory well in the Lost Hills Field of Kern County will land surface pipe around the 1,750-foot level. In the North Belridge Field, the Ohio Oil Co. is drilling ahead in No. 1 Bloemer at 8,175 feet with substantial showings of oil and gas on the ditch. This well, although running quite a bit deeper structurally than the Belridge Oil Co.'s deep zone discovery, has been showing up exceptionally good during the past several weeks and has all the earmarks of a successful completion upon the conclusion of drilling. This well is one of the most important deep tests under way in the San Joaquin Valley at the present time because if it results in commercial production it will automatically add several hundred acres to the amount of productive land in this field. Completion of this well will probably result in the resumption of drilling by The

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

| | Jan. 7, 1933 | | Dec. 31, 1932 | | | |
|---|---|---|---|---|---|---|
| Intercoastal-domestic— | Total this week | Daily average | Total last week | Daily average | This year to date | Same time last year |
| Gasoline | 160,820 | 22,974 | 72,775 | 10,396 | 160,820 | ..... |
| Kerosene | 79,672 | 11,382 | ..... | ..... | 79,672 | ..... |
| Foreign exports— | | | | | | |
| Crude oil | 177,149 | 25,307 | 88,197 | 12,600 | 177,149 | 65,005 |
| Fuel oil | 113,330 | 16,190 | 100,571 | 14,367 | 113,330 | 507,617 |
| Diesel and gas oil | 74,779 | 10,683 | 82,816 | 11,831 | 74,779 | 9,029 |
| Gasoline | 91,816 | 13,117 | 70,010 | 10,001 | 91,816 | 357,087 |
| Kerosene | ..... | ..... | ..... | ..... | ..... | 93,336 |
| Coastwise-domestic— | | | | | | |
| Crude oil | 255,755 | 36,536 | 241,281 | 34,469 | 255,755 | 287,940 |
| Fuel oil | 129,580 | 18,511 | 111,138 | 15,877 | 129,580 | 430,527 |
| Diesel and gas oil | 39,764 | 5,672 | 7,660 | 1,094 | 39,764 | 88,495 |
| Gasoline | 274,907 | 39,272 | 340,565 | 48,652 | 274,907 | 268,124 |
| Kerosene | 12,706 | 1,815 | 516 | 74 | 12,706 | 6,038 |

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Intercoastal-domestic— | | | | | | |
| Diesel and gas oil | ..... | ..... | 78,941 | 11,277 | ..... | ..... |
| Kerosene | 154,070 | 22,010 | ..... | ..... | 154,070 | ..... |
| Foreign exports— | | | | | | |
| Fuel oil | ..... | ..... | 58,725 | 8,389 | ..... | 223,092 |
| Diesel and gas oil | ..... | ..... | ..... | ..... | ..... | 44,714 |
| Gasoline | ..... | ..... | 71,268 | 10,181 | ..... | ..... |
| Kerosene | ..... | ..... | 16,642 | 2,378 | ..... | 10,406 |
| Coastwise-domestic— | | | | | | |
| Fuel oil | 23,450 | 3,350 | ..... | ..... | 23,450 | ..... |
| Diesel and gas oil | ..... | ..... | ..... | ..... | ..... | 97,508 |
| Gasoline | 61,444 | 8,778 | 165,989 | 23,713 | 61,444 | 138,213 |
| Kerosene | 3,753 | 536 | ..... | ..... | 3,753 | ..... |

Texas Company and Richfield Oil Co. in their respective outposts which were suspended following the failure to pick up the productive Temblor. If the Ohio decides to produce No. 1 Bloemer following completion in the Wagonwheel zone, the Belridge Oil Co. will undoubtedly open its discovery well. This deep zone production will make it necessary for the Continental, Union and Associated to undertake immediate offset drilling. Recognizing the seriousness of the situation, operators are endeavoring to prevent any deep zone exploitation in the North Belridge Field for several months.

### Buttonwillow

The Milham Exploration Co. will finish No. 14-31 as a gas well in the Buttonwillow Gas Field of Kern County some time during the course of the next few days as the company is drilling out the cement following the landing of a string of 8⅝-inch casing at 2,328 feet. A new rig has been erected in Section 8-28-23 for No. 3 Whitaker, and this project is expected to be spudded in immediately subsequent to the completion of well No. 14-31. There are only two wells making hole in the Devil's Den region at the present time but neither A. S. Hollaway's No. 1 in Section 11-25-18 or the Pyramid Oil Co.'s test in Section 24-25-18 is deep enough to pick up the Temblor. In the Fruitvale Field, the Western Gulf has started rig construction for No. 1 Simpson to be drilled in Section 21-29-27. The Western Gulf hung up its tools in the Fruitvale Field along about last September and so No. 1 Simpson is the first project to be started by this company in the Fruitvale Field for several months. The Fruitvale Oil Co.'s well No. 1, bottomed at 4,083 feet and finished with a 4¾-inch perforated liner, has been rather slow in getting under way due possibly to the lack of sufficient gas pressure to result in a natural flow. This well was swabbed down to the 2,000-foot level during the early part of the week but is sanded up and will consequently be bailed out. In the Gould Hills, north of the McKittrick Field, T. H. Purman is drilling ahead in well No. 3 but is expected to resume work in No. 1 within the next day or so as the cement in this hole has had ample time to set.

### Mount Poso

The Shell Oil Co. has recompleted No. 6 Vedder in the Mount Poso Field of Kern County after redrilling and deepening the hole to 1,825 feet. The additional hole added was productive of better results from a production standpoint as the well is now pumping 460 bbls. of 15.4 gravity oil per day. The Shell recently completed a new rig for No. 6 Security and this project is expected to be spudded in some time during the course of the next few days. The Pacific Coast Division Oil Co. is rigging up rotary equipment in a new well to be drilled in Section 14-27-27. The California Western Oil Co., which is making preparations to complete a new well in the Round Mountain Field of Kern County at 1,631 feet, has material on ground for a new hole to be drilled in the Mount Poso Field, but will probably not start actual work until completion of work in the former area. The Coffee Petroleum is pulling the 6⅝-inch liner from No. 3 in the Round Mountain Field preparatory to drilling ahead in order to open up more formation. The Standard is making preparations to perforate the pipe in No. 1 Mascot, a deep test in the Midway-Sunset Field of Kern County, preparatory to conducting a production test before abandoning work. This well will probably be tested from time to time on the way out. Drilling operations were concluded at 9,762 feet but a plug has been set at 8,859 feet. The Darby Syndicate spudded in No. 2 Cypress, a new well in the Midway-Sunset Field in Section 22-32-23, and

(Continued on Page 77)

### IMPORTANT NORTHERN CALIFORNIA WILDCATS

| Company, well and location— | S.T.R. | Depth | Status: |
|---|---|---|---|
| Standard, No. 1 Santa Rosa Island, Santa Barbara Co. | unsurveyed | 6,120 | gr. sh. drilling |
| Meganos Oil Co., No. 1 Lompoc, Santa Barbara Co. | 28- 8-34 | .... | material |
| Smith, E. W., No. 1 Purisima, Santa Barbara Co. | 18- 7-34 | 1,471 | suspended |
| Duell, O. S., No. 1 Naples, Santa Barbara Co. | 7- 4-29 | 5,132 | suspended |
| Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co. | 24- 4-29 | 3,750 | suspended |
| Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co. | 25- 4-29 | 4,089 | suspended |
| Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co. | 12-10-27 | 2,162 | suspended |
| Woodrow Pet., No. 1 Rincon, Ventura Co. | 4- 3-24 | 6,371 | br. sh. drilling |
| Indian Pet., No. 1 Rincon, Ventura Co. | tideland | 2,115 | building P.L. |
| Commander Oil Co., No. 1 Fillmore, Ventura Co. | 13- 4-19 | 3,100 | cleaning out |
| Sovereign Oil Co., No. 1 Fillmore, Ventura Co. | 23- 4-19 | 3,177 | abandoning |
| Hancock Oil Co., No. 1 Fillmore, Ventura Co. | 13- 4-19 | 940 | cleaning out |
| Honolulu Cons., No. 1 Miguelito, Ventura Co. | 33- 3-24 | 4,191 | sd. sh. drilling |
| Continental, No. 2 Miguelito, Ventura Co. | 33- 3-24 | .... | building road |
| C. C. M. O., No. 3-A Miguelito, Ventura Co. | 23- 3-24 | .... | material |
| Macrate, A. N., No. 1 Ojai, Ventura Co. | 27- 4-23 | 914 | sd. sh. drilling |
| Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co. | 20- 4-21 | 1,502 | fishing |
| Mosher, J. W., No. 1 Santa Paula, Ventura Co. | 22- 4-21 | 816 | cemented |
| Superior Oil Co., No. 1 Timber Canyon, Ventura Co. | 13- 4-21 | 4,175 | prod. test |
| Hardison & Temple, No. 1 Timber Canyon, Ventura Co. | 22- 4-21 | 248 | reaming |
| Petro Prod. Co., No. 1 Timber Canyon, Ventura Co. | 18- 4-20 | 2,482 | suspended |
| International Oil Dev., No. 1 Conejo, Ventura Co. | 33- 2-20 | 2,470 | hd. sd. drilling |
| Anderson, C. L., No. 1 Santa Susana, Ventura Co. | 36- 3-18 | 101 | sd. sh. drilling |
| Milham Explr., No. 22 Buttonwillow, Kern Co. | 31-27-23 | 2,331 | sd. sh. drilling |
| Milham Explr., No. 23 Buttonwillow, Kern Co. | 8-28-23 | rig | rigging up |
| Purman, T. H., No. 1 Gould Hills, Kern Co. | 22-29-21 | 5,384 | cemented |
| Purman, T. H., No. 2 Gould Hills, Kern Co. | 27-29-21 | 210 | sd. sh. drilling |
| General Pet., No. 1 Belridge, Kern Co. | 30-28-21 | 8,260 | suspended |
| Cumberland Oil Co., No. 2 Devils Den, Kern Co. | 17-26-18 | 3,270 | suspended |
| Hellaway, A. S., No. 1 Devils Den, Kern Co. | 11-25-18 | 1,530 | br. sh. drilling |
| Hanna, Tom, No. 1 Devils Den, Kern Co. | 25-25-18 | 3,516 | suspended |
| Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co. | 24-25-18 | 2,397 | sd. sh. drilling |
| Fowler, F., No. 1 Blackwell Corner, Kern Co. | 15-26-19 | 3,170 | suspended |
| Associated, No. 1 Lost Hills, Kern Co. | 2-26-20 | 1,703 | hd. sd. drilling |
| Seminole Oil Co., No. 1 Lost Hills, Kern Co. | 29-25-21 | .... | material |
| Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co. | 30-16-23 | 2,970 | suspended |
| Bergman, Harry, No. 1 Kingsburg, Fresno Co. | 12-12-11 | 391 | suspended |
| Graham & Loftus, No. 1 Raisin City, Fresno Co. | 20-15-13 | 2,692 | sd. sh. drilling |
| Emerich Oil Co., No. 1 Mendota, Fresno Co. | 35-13-13 | .... | material |
| Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo. | 3-32-22 | 3,815 | suspended |
| Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo. | 23-32-22 | 1,841 | suspended |
| Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co. | 26-31-12 | 3,352 | suspended |
| Paso Robles Oil Co., No. 1 Edna, San Luis Obispo | 27-27-11 | 4,191 | suspended |
| Shell, No. 1 San Miguel, San Luis Obispo Co. | 4-25-12 | 4,291 | br. sh. drilling |
| Pacific Inland, well No. 1, Monterey Co. | 19-23-15 | 2,441 | suspended |
| Thomas Pet., No. 1 Parkfield, Monterey Co. | 31-22-14 | 1,011 | sd. sh. drilling |
| Guess, E. B., No. 1 Corcoran, Kings Co. | 7-21-21 | 6,197 | suspended |
| Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co. | 9-23-20 | 3,012 | suspended |
| Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co. | 36-23-17 | 6,093 | sd. sh. drilling |
| Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co. | 10-23-16 | rig | cable tools |
| Magee & Stone, No. 1 Alpaugh, Kings Co. | 34-24-22 | 5,060 | suspended |
| Ducor Pet. Co., No. 1 Ducor, Tulare Co. | 14-24-27 | 2,200 | suspended |
| Island Valley Oil Co., No. 1 Visalia, Tulare Co. | 24-17-24 | 2,092 | suspended |
| Ellis & Sanford, No. 1 Tulare Lake, Tulare Co. | 20-24-23 | 1,490 | suspended |
| Napa Oil Co., No. 1 Griffith, Napa Co. | 7- 8- 3 | 7,273 | sd. sh. drilling |
| Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co. | 5- 2-10 | 4,813 | suspended |
| Rushing Oil Co., No. 1 Waterford, Stanislaus Co. | 20- 3-13 | 3,653 | sd. sh. drilling |
| Pacific Northern Oil Co., No. 1 Guinda, Yolo Co. | 23-12- 3 | 3,045 | suspended |
| Buttes Oilfields Co., No. 1 Marysville, Sutter Co. | 35-16- 1 | 602 | hd. sd. drilling |
| Tehama Pet. Co., well No. 1, Tehama Co. | 4-22-15 | 1,182 | hd. sd. drilling |
| Orland Synd., No. 1 Orland, Tehama Co. | 31-23- 3 | 3,400 | suspended |

### IMPORTANT SOUTHERN CALIFORNIA WILDCATS

| Company, well and location— | S.T.R. | Depth | Status: |
|---|---|---|---|
| Hines Pet., No. 1 Ocean Park, Los Angeles Co. | 8- 2-15 | 7,414 | suspended |
| Taylor Oil Co., No. 1 Culver, Los Angeles | 13- 2-15 | 6,228 | suspended |
| Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co. | 2- 2-15 | 3,401 | suspended |
| Williams Oil Co., No. 1 Monetta, Los Angeles Co. | 23- 2-14 | rig | suspended |
| Pan Tex Oil Co., No. 1 Lawndale, Los Angeles Co. | 20- 3-14 | rig | rigging up |
| Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co. | 7- 2-14 | 5,863 | testing |
| Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co. | 17- 2-14 | 4,090 | recemented |
| Stephens, J. J., No. 1 Athens, Los Angeles Co. | 19- 3-13 | 4,635 | resume work |
| Pacific Oil Inv. Co., No. 1 Wilmington, Los Angeles Co. | 28- 4-13 | 3,014 | sd. sh. drilling |
| Wilmington Oil Co., No. 1 Wilmington, Los Angeles Co. | 28- 4-13 | 312 | sd. sh. drilling |
| Jones, W. L., No. 1 Lynwood, Los Angeles Co. | 31- 2-12 | 4,480 | suspended |
| Hutcheson & Andrus, No. 1 El Monte, Los Angeles Co. | 11- 1-11 | 1,397 | suspended |
| Sanbar Pet., No. 1 Saugus, Los Angeles Co. | 35- 5-16 | 950 | cleaning out |
| Smith, J. A., No. 1 Saugus, Los Angeles Co. | 32- 5-17 | 3,515 | suspended |
| Alexander, W. L., No. 1 Newhall, Los Angeles Co. | 1- 3-16 | 501 | suspended |
| Garliepp, F. J., No. 1 Newhall, Los Angeles Co. | 14- 3-16 | 117 | sd. drilling |
| Ball, W. T., No. 1 Newhall, Los Angeles Co. | 34- 3-16 | 3,582 | suspended |
| Big Four Oil Co., No. 1 Newhall, Los Angeles Co. | 32- 4-16 | 612 | sd. sh. drilling |
| Marble, Willard, No. 1 Van Nuys, Los Angeles Co. | 6- 2-16 | 1,598 | suspended |
| Nuoil Co., No. 1 Newport, Orange Co. | 29- 6-10 | 2,165 | cleaning out |
| Mineral Expl., No. 1 Capistrano, Orange Co. | 8- 8- 7 | 4,283 | suspended |
| Orangethorpe Pet., No. 1 Brea, Orange Co. | 32- 3-10 | 4,560 | suspended |
| Spindletop Oil Co., No. 1 Salton Sea, Riverside Co. | 25- 7-10 | 3,590 | suspended |
| Keeley, H. J., No. 1 Corona, Riverside Co. | 31- 4- 6 | rig | suspended |
| Duncan, N. L., No. 1 Sagebrush, Riverside Co. | 8- 4- 6 | 1,157 | suspended |
| Colan Dev. Co., No. 1 Redlands, San Bernardino Co. | 25- 1- 2 | 2,392 | suspended |
| Great American Pet., No. 1 Chino, San Bernardino Co. | 18- 2- 8 | 1,509 | rig down |
| Mason Oil Co., No. 1 Salton Sea, Imperial Co. | 1-17-15 | 860 | suspended |
| Woods, D. H., No. 1 Salton Sea, Imperial Co. | 7-11-16 | 774 | suspended |

## Wildcat Operations in Louisiana-Arkansas

(Continued from Page 42)

### BOSSIER PARISH

Breazelle & Steckoll's No. 1 Nattin, C SW NE, Sec. 16-22-14 ..... Set 6-in. 2,967 ft; swabbed; show oil and gas 3,018 ft; S.D.

Breazelle & Steckoll's No. 2 Nattin, 300 ft. S and W, NE cor. NW NE Sec. 22-22-14 ..... Moving in rig.

Cryer Oil Co.'s No. 1 fee, 2,400 ft. N, 1,080 ft. E, SW cor. Sec. 25-19-12 ..... Derrick.

A. W. Phillips, tr.'s No. 1 Oden, 300 ft. W, 150 ft. N, SE cor. NW NW, Sec. 4-18-13 ..... Cored 12-ft. sand showing oil; W. O. 1,017 ft.

### CADDO PARISH

Bolinger & Walker's No. 1 Thompson, SE SW Sec. 16-22-14 ..... Drlg. chalk 1,990 ft.

### CLAIBORNE PARISH

Leue Oil Co.'s No. 1 Kiser, Sec. 2-21-7 ..... Rigging up.

A. W. Phillips, Tr.'s No. 1 Jehu Knighton, 330 ft. N, 330 ft. E SW cor. NE SE, Sec. 31-20-7 ..... Derrick.

United Gas Public Service Co.'s No. 1 Meadows, approximately 100 ft. S, center E½ E½ Sec. 13-21-5 .. Cored black shale 2,730 ft.

Webster Oil Co.'s (was Robertson & Aurand) No. 1 Smith, 200 ft. S and E, NW cor. SE NE Sec. 8-21-7 .. S.D. 1,700 ft.

### CONCORDIA PARISH

M. M. Stokes' No. 1 Pan-American Life Ins. Co., 7,300 ft. W, 300 ft. N, SE cor. irregular Sec. 18-9n-10e ... Began Dec. 10; cmtd. 12-in. 160 ft; S.D. 814 ft.

### DE SOTO PARISH

Baggett et al's No. 1 Moore, 330 ft. S, 330 ft. W NE cor. NW, Sec. 1-13-15 ..... Rig.

Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW Sec. 12-10-11 ..... S.D. 60 ft.

Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor. Sec. 31-14-15 ..... S.D. 2,470 ft.

M. B. Gill's No. 1 W. J. Hill, 330 ft. N, 330 ft. E center Sec. 4-10-13 ..... Began drlg. Dec. 1; cmtd. 12½-in. 111 ft.

S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE Sec. 31-14-14 ..... D.S. test 3,075 ft.; dry; W.O.

Mrs. A. L. Ibach, tr.'s No. 1 Rambin, 250 ft. S and E, NW cor. NE NE Sec. 32-11-11 ..... Drlg. shale 1,689 ft.

E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW Sec. 30-13-15 ..... Cored Oolitic lime showing oil 4,240-60 ft; coring 4,515 ft.

DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-13 ..... Partly rigged up and S. D.

Geo. L. Pace's No. 1 John Cole, 200 ft. N, 150 ft. E. SW cor. SE NE Sec. 11-11-11 ..... Rig up.

G. C. Smith et al's No. 1 Wolluma, 330 ft. N and W, SE cor. Sec. 30-12-12 ..... S.D. chalk 1,520 ft.

E. J. Stanberry's No. 1 Naborton O. & G. Co., Sec. 32-13-11 ..... Drlg. shale and chalk 1,250 ft.

State Drlg. & Prod. Co.'s No. 1 Wemple, 330 ft. N and E, SW cor. NW SW Sec. 14-12-11 ..... S.D. chalk 1,205 ft.

Warren & Craig's No. 1 J. A. Wagner, 150 ft. S and W from C, Sec. 5-12-14 ..... S.D. for fuel 2,450 ft. in shale.

Jack Whitson's No. 1 Sanders, 330 ft. N and E, SW cor. Sec. 19-11-13 ..... Tested dry; top Blossom 2,025 ft. S.D. for cag.; claim 4-ft. sand showing oil; cmtd. 6-in. 2,712 ft; T.D. 2,750 ft.

### GRANT PARISH

A. W. Phillips, tr.'s No. 1 Cameron, 300 ft. N, 200 ft. E, SW cor. SW NW Sec. 26-7-3w ..... Cmtd. 10-in. 60 ft; S.D.

O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor. Sec. 16-9n-1e ..... Derrick.

H. H. Temple's No. 1 Edenborn Est., 2,640 ft. E, 550 ft. S, NW cor. Sec. 20-7-3w ..... Derrick pattern.

H. H. Temple's No. 1 Guaranty State Bank, 200 ft. E, 200 ft. S, NW cor. Sec. 9-5-1 ..... Location.

### MOREHOUSE PARISH

Feazel & Kaill's No. 1 Davenport, Sec. 28-21-4e ..... S.D. 2,510 ft.

H. G. Samson's No. 1 Barnes & Sullivan, NE cor. SW Sec. 12-21-7 ..... Derrick.

H. W. Snowden's No. 1 Meyers, 330 ft. S and E, SW cor. NE NE Sec. 15-23-7e ..... S.D. 30 ft.

### NATCHITOCHES PARISH

Allender & Rasmussen's No. 1 Cane River, 330 ft. N and W, SE cor. Sec. 61-6n-5w ..... S.D. 100 ft.

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ..... S.D. fuel, 2,150 ft.

J. B. Oil Co.'s No. 1 Hankins et al, Sec. 67-10-7 ..... S.D. 670 ft.

Natchitoches Pet. Co.'s No. 1 Edenbarn, 2,240 ft. W, 1,320 ft. S, NE cor. Sec. 4-11-6w ..... Drlg. 2,535 ft.

Sampson et al's No. 1 Friedman estate, 406 ft. N, 428 ft. E SW cor. Friedman estate in Sec. 52-7-6 .... Moving in rig.

Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-4 ..... Set 6⅝-in. 3,869 ft.; tested S.W. 3,475 ft.

### OUACHITA PARISH

Inabnet & Pipe's No. 1 Van Horn, 1,980 ft. N, 660 ft. E, C Sec. 14-18-5 ..... Rig up; W.O.

Milhivan Gas Corp.'s No. 1 W. Va. L. & T. Co., 1,980 ft. E, 1,320 ft. N, center Sec. 10-17-5e ..... Location.

Monroe Oil & Royalties Co.'s No. 1 Thieler, 150 ft. N and E, SW cor. SE NW Sec. 34-18-3e ..... S.D. 2,575 ft.

### RAPIDES PARISH

Evers & Collingsworth's (was A. G. Beck et al) No. 1 Hickman-Simmons Lbr. Co., 330 ft. S, 330 ft. W, NE cor. SW SW Sec. 32-4-1e ..... Derrick.

Pet. Industries, Inc.'s No. 1 Lee Lbr. Co., 330 ft. N, 300 ft. W, SE cor. NW SE Sec. 13-5n-2e ..... Derrick.

### RED RIVER PARISH

Edward & Clay's No. 1 Delta Pecan Co., 1,600 ft. N, 450 ft. E, SW cor. Sec. 27-13-11 ..... S.D. 1,700 ft.

H. M. Jones' No. 1 A. N. Sample, 330 ft. S, 330 ft. E, NW cor. Sec. 10-14-11 ..... Location.

G. T. Shaw et al's No. 1 Wilkinson, 300 ft. N, 460 ft. W, SE cor. NE SE Sec. 4-12-10 ..... Drlg. 1,650 ft.

### RICHLAND PARISH

Humble Prod. Co.'s No. 1 fee, SW NW Sec. 11-14-6 ..... Location.

SABINE PARISH

Coates Pet. Co.'s No. 3 Stills, 330 ft. N and E, SW cor. Sec. 36-8-13 ..... Location.
Craft & Primm's No. 1 C. Alford, 720 ft. S, 460 ft. E, NW cor. SW NW Sec. 18-7-10 ..... Drlg. 2,330 ft.
Ellis & Dumas' No. 1 Pickering Lbr. Co., SE SE Sec. 13-4-12 ..... Derrick.
Flinchbaugh & Myers' No. 1 Aaron, 250 ft. S and E, NW cor. Sec. 33-8-13 ..... Rigged up on second hole; W.O
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 300 ft. W, NE cor. NW NW Sec. 19-8-13 ..... S.D.; shale and lime 6,880 ft.
R. T. Henderson's No. 1 Sistrunk, 460 ft. N, 150 ft. W, C, Sec. 9-9-13 ..... Cmtd. 6-in. 1,670 ft; bailing back to test; T.D. 1,699 ft.
Hollis et al's No. 1 Sabine State Bank, 350 ft. N and W, SE cor. SW SW Sec. 25-8-11 ..... Cmtd. 6-in. top marl 2,236 ft.
Ab Jones' No. 1 Garcia, 300 ft. S and W, NE cor. NW SE Sec. 4-7-13 ..... T.A. 2,070 ft.
O. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE Sec. 34-8-11 ..... Cmtd. 6-in. 2,351 ft; S.O. 2,495 ft; W.O.
G. W. Langley et al's No. 1 Peavy-Wilson Lbr. Co., 330 ft. S and W, NE cor. Sec. 16-5-9 ..... Derrick.
Geo. LeGrand's No. 1 McGough, 300 ft. S, 300 ft. E, NW cor. SW NW Sec. 2-8-10 ..... Bailing to test small S.G. 2,410 ft.
C. D. Lee, tr.'s No. 1 Whitney, 330 ft. N and W, SE cor. NW NE Sec. 13-9-14 ..... S.D. 1,715 ft.
Ben Merritt's No. 1 Lucina, 400 ft. N, 378 ft. E, SW cor. SW NE Sec. 4-8-13 ..... Derrick.
H. W. Perritt's No. 3 Brown Lbr. Co., 519 ft. S, 455 ft. W, NE cor. NW NE Sec. 31-8-10 ..... Cmtd. 6-in. top marl 2,529 ft; tested dry 2,600 ft; S.D. repairs 2,604 ft; T.D.
Roy Raines et al's No. 1 Beard, 730 ft. E, 700 ft. N, SW cor. SW SE Sec. 8-8-10 ..... Drlg. 700 ft.
Reeves & McNeely's No. 1 Pender, 336 ft. N and W from C, Sec. 15-7-11 ..... Began drlg. Nov. 7; cmtd. 10-in 21 ft.
Thornton et al's No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE Sec. 4-7-13 ..... S.D. 2,043 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 324 ft. S, 431 ft. W, NE cor. SW NE Sec. 5-7-13 ..... S.D.; W.O. 2,500 ft.
Roberts & Sledge's No. 1 La. Long Leaf Lbr. Co., 300 ft. N, 448 ft. E, SW cor. NE SE Sec. 29-8-10 ..... Derrick.
Roberts & Sledge's No. 2 Sabine Lbr. Co., 803 ft. W, 794 ft. N, SE cor. SE SW Sec. 5-7-13 ..... W.O.S.R. 2,480 ft.
Roshko & LaBane's No. 1 Mainea, 427 ft. E, 114 ft. N, SW cor. SE SE Sec. 35-8-11 ..... S.D. 1,650 ft.

CONVERSE DISTRICT

Alford & Cleary's No. 1 Jackson, 330 ft. N and E, SW cor. SE NW Sec. 10-9-13 ..... Location.
Alford & Cleary's No. 1 Patrick, 330 ft. S and W, NE cor. SW NE Sec. 11-9-13 ..... Location.
Cloud & Bolin's No. 1 Bowman-Hicks, SE cor. NE NE Sec. 24-9-13 ..... Cored sand and marl 1,734 ft bailed down 1,200 ft.; no show dry 2,200 ft; bailed dry; S.O. dry 2,200 ft; bailed dry; washing to bottom; T.D. 2,210 ft.
Evans Bros.' No. 1 Cranford, 300 ft. S, 300 ft. W NE cor. SE SE, Sec. 30-9-13 ..... Ratholing 1,500 ft.
H. P. Key's No. 1 T. J. Paul, 120 ft. S, 110 ft. W, NE cor. Blk. 25, Converse townsite in Sec. 10-9-13 ..... Location.
Lambert et al's No. 1 Edwards, 300 ft. S and E, NW cor. SW NW Sec. 29-9-13 ..... Location.
H. C. Lessenger's No. 1 Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. Sec. 13-9-13 ..... Derrick.
Lee & Burnett's No. 1 Burckett, 330 ft. N and W, SE cor. NW SW Sec. 10-9-13 ..... Tested dry 1,795 ft; W.O
Hy Rockmill's No. 1 Cassell, 330 ft. S, 330 ft. W, NE cor. Sec. 35-9-14 ..... Derrick.
Rockmill et al's No. 1 Bowman-Hicks, 330 ft. S and W, NE cor. NW Sec. 36-9-14 ..... S.D. for fuel 1,520 ft.
Mick Barbare's No. 1 Ryals, 330 ft. S and E, NW cor. Sec. 27-9-13 ..... Cmtd. 6-in. 1,515 ft.; top sand 1,535 ft; tested dry; W.O.; T.D. 1,555 ft.
Rockmill et al's No. 1 Patrick, 330 ft. S, 330 ft. E, NW cor. NE NW Sec. 21-9-13 ..... Rig up.
H. M. Self's No. 1 Paul, 330 ft. N and W, SE cor. NE SW Sec. 9-9-13 ..... Derrick.
Service Drlg. & Royalty Corp.'s No. 1 Whitney Corp., 330 ft. N and W, SE cor. Sec. 32-10-13 ..... Top marl 1,551 ft; S.D. 1,940 ft.
Ben Youngblood et al's No. 1 Burket, 330 ft. S and W, NE cor. NE NW Sec. 10-9-13 ..... Derrick.
Roshko & Labarre's No. 1 Mainea, 427 ft. E, 114 ft. N, SW cor. SE NE Sec. 35-8-11 ..... Fishing for bit; T.D. 1,972 ft.
Sabine Prod. Co.'s No. 1 Whiting Corp., 150 ft. N and E, SW cor. Sec. 4-9-13 ..... Top marl 1,470 ft. and cmtd. 6-in.; drlg. 1,730 ft.; tested S.W., small show gas 2,154 ft; S.D. 2,207 ft
Skidmore & Mize's No. 1 Stoker, 440 ft. N, 325 ft. E, SW cor. SE NW Sec. 33-8-10 ..... S.D. 1,450 ft.
C. W. Smith et al's No. 1 Pattison, 330 ft. S and E, NW cor. SE NW Sec. 33-10-11 ..... Swedging collapsed csg.; T.D. 3,100 ft.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE Sec. 13-9-11 ..... S.D. fuel, 2,237 ft.
Triangle Drlg. Co.'s No. 1 La. Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ..... S.D. 4,013 ft.
W. M. Ungerman's No. 1 F. Cross, 53 ft. S, 146 ft. W, NE cor. SW SE Sec. 25-8-11 ..... Cmtd. 6-in. at 2,421 ft; drilled plug; S.D.
Zwelle Prod. Co.'s (was Baird Bros.) No. 1 Tatum, SW NE Sec. 25-5-12 ..... Fishing for tools 1,200 ft.

TENSAS PARISH

H. V. Schumacker's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor. Sec. 29-11-13 ..... Reaming to bottom; T.D. 3,645 ft

UNION PARISH

E. S. Goens et al's No. 1 Frost Lbr. Co., 330 ft. S and E, NW cor. Sec. 17-22-3e ..... Cored sand showing gas 1,045-49 ft.; S.D. 1,050 ft.
W. D. Wingfield et al's No. 1 Union Sawmill Co., 330 ft. N and E, SW cor. Sec. 27-22-1e ..... Drlg. 2,544 ft.

VERNON PARISH

Earl Jones' No. 1 Willis, 350 ft. N 400 ft. E, SW cor. SE SE Sec. 33-3n-9w ..... Cmtd. 10-in. 110 ft; S.D. 650 ft.
Llano Co-operative Colony's No. 1 fee, NW NE Sec. 34-3n-9w ..... Claim S.O.; D.S. test 3,629 ft.

WEBSTER PARISH

J. E. Bundy's No. 1 Walker, 300 ft. S, 300 ft. W, NE cor. SE NW Sec. 11-18-10 ..... Derrick pattern.
R. E. Silvey et al's No. 1 Drake est., C NE NE Sec. 14-19-10 ..... S.D. 2,794 ft; shale.

WEST CARROLL PARISH

Mamie S. McCurry's No. 1 Richard & Donnaw, 300 ft. N and E, SW cor. Sec. 13-19-9e ..... Rigging up.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW Sec. 28-13-3 ..... S.D. for 8-in. csg. 1,050 ft.

## Arkansas

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 300 ft. E, SW cor. SW Sec. 24-11-9 ..... S.D; W.O. 3,400 ft.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenwelder, 300 ft. S and E, NW cor. NE NE Sec. 13-17-22 ..... Cmtd. 6-in. 2,460 ft.; claim show oil and gas 2,520 ft.; bailed down 1,100 ft.; S.W. show.

HEMPSTEAD COUNTY

Rhinehart & Trottner's No. 1 C. H. Jones, Sec. 2-13-26 ... Derrick.

JEFFERSON COUNTY

R. V. Harrell et al's No. 1 McGeughey NW cor. Sec. 33-7-10 ..... Drlg. 450 ft.

LAFAYETTE COUNTY

Chas. McDonald's No. 1 Allen, 400 ft. N and W, SE cor. SE SW Sec. 2-19-26 ..... S.D. 2,910 ft.
Sam E. Wilson, Jr.'s No. 1 Smith, 330 ft. N and E, SW cor. NW SE Sec. 24-18-25 ..... Derrick.

LINCOLN COUNTY

Lawrence M. Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 220 ft. W, NE cor. NE SW ..... Coring 3,300 ft.

LITTLE RIVER COUNTY

American Portland Cement Co.'s No. 1 fee, 150 ft. S and E, NW cor. SW NE Sec. 21-12-33 ..... Cmtd. 10-in. 100 ft; drlg. 820 ft.
M. E. Sanderson's No. 1 Hale, 1,300 ft. E, 300 ft. N, SW cor. SE SE Sec. 23-13-29 ..... S.D. 1,405 ft.

MILLER COUNTY

Baker & McMurray's; (was Roy Baker et al's) No. 1 Olivet, 300 ft. S, 300 ft. E, NW cor. NE NE Sec. 4-16-26 ..... D.S. test 2,943 ft; T.D. in 11-ft. oil sand, 2-ft. S.W. sand; 13 bbls. oil and 24 bbls. S.W. in 30 min.
Baker & McMurray's No. 1 Andrew Rose, 150 ft. S and W, NE cor. NE NW Sec. 4-16-26 ..... Began drlg. Jan. 16; cmtd. 10-in. 210 ft.
Capt. E. Byrd's No. 1 Miller Land & Lbr. Co., 1,320 ft. N and W, SE cor. Sec. 29-18-27 ..... Derrick.
John M. Burnham's No. 1 E. L. Beck, 150 ft. N and E SW cor. SW NE Sec. 32-15-26 ..... Moving in rig.
John DeGrozier's No. 1 Andrew Rose, 150 ft. S and E, NW cor. N½ N½ NW NW Sec. 4-16-26 ..... Location.
John DeGrozier's No. 2 Andrew Rose, 155 ft. S and E, NW cor. N½ NE NE Sec. 4-16-26 ..... Location.
Duluth-Ark. Oil Co.'s No. 1 Price, NW cor. NE Sec. 17-16-25 ..... Derrick.
Fitzwater et al's No. 1 C. J. Noreen, SW cor. SE SW Sec. 29-15-27 ..... S.D. 1,980 ft.
Fitzwater et al's No. 1 Fouke, 150 ft. S and W, NE cor. Sec. 11-17-27 ..... Cmtd. 12½-in. 105 ft; S.D.
Lee L. Foster's No. 1 Geo. Jones, 660 ft. N, 200 ft. W, SE cor. NW NW Sec. 29-16-26 ..... Cmtd. 10-in. 203 ft; drlg. 650 ft.
Hapgood et al's No. 1 Rose, SE cor. NE SE Sec. 7-16-26 .. Drlg. sandy shale 2,715 ft.
Jenkins Bros.' (was Roy Jenkins et al's) No. 1 B. F. Smith, 330 ft. W, 330 ft. N, SE cor. SE SE Sec. 32-15-26 ..... Began drlg. Jan. 14; cmtd. 10-in. 196 ft; drlg. 1,750 ft.
Jenkins Bros.' No. 2 Smith, 150 ft. S and W, NE cor. SE SE Sec. 32-15-26 ..... Location.
Jenkins Bros.' No. 3 Smith, 150 ft. S, 710 ft. W, NE cor. SE SE Sec. 32-15-26 ..... Location.
Jenkins Bros.' No. 4 Smith, 150 ft. S and E, NW cor. SE SE Sec. 32-15-26 ..... Location.
Bob Manziel's No. 1 B. F. Smith, 150 ft. N and W, SE cor. S½ S½ NE NE Sec. 32-15-26 ..... Rigging up.
Bob Manziel's No. 2 Smith, 150 ft. N, 660 ft. W, SE cor. NE SE Sec. 32-15-26 ..... Location.
Bob Manziel's No. 3 Smith, 150 ft. N and E, SW cor. NE SE Sec. 32-15-26 ..... Location.
Molar Oil Club's No. 1 A. M. Gibson, NW cor. SW Sec. 30-18-27 ..... Derrick.
C. H. Nelson et al's No. 1 Rose, 155 ft. S, 155 ft. W, NE cor. SE NW Sec. 4-16-26 ..... Cmtd. 10-in. 200 ft; drlg. 1,050 ft.
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor. Sec. 11-20-27 ..... S.D., W.O. 2,600 ft.
R. M. Olds' No. 1 E. D. Olivet, 150 ft. S and W, NE cor. NE SW Sec. 4-16-26 ..... Location.
J. D. Reynolds' No. 1 E. L. Beck, 450 ft. E, 250 ft. N, SW cor. SW SE Sec. 25-15-26 ..... Location.
J. D. Reynolds' No. 1 B. F. Smith, 150 ft. N and W, SE cor. SE SW Sec. 32-15-26 ..... Location.
John C. Rogers' No. 1 Price, 330 ft. S, 400 ft. E NW cor. NW NW Sec. 17-16-25 ..... Rig up; S.D.
E. H. R. Sabens' No. 1 E. V. Olivet, 150 ft. S, 907 ft. W, NE cor. NE SW Sec. 4-16-26 ..... Location.
Simon & Birdwell's (was C. E. Starr's) No. 1 Barker, 330 ft. S, 150 ft. E, NW cor. NW SE Sec. 31-17-26 ... Rigging up.
Serrells & Tidwell's No. 1 Roy McCowan, 660 ft. S and E, NW cor. NW SE Sec. 23-15-28 ..... Set 10-in. 106 ft.; top Nacatoch 775 ft.; S. D.
Stephens, Byers & Sartain's No. 1 Lowe, 600 ft. S, 300 ft. E, NW cor. SE NW Sec. 14-16-27 ..... Drlg. lime and shale 2,720 ft.
A. C. Taylor's No. 1 Williams, 150 ft. N and E, SW cor. SW NE Sec. 5-16-26 ..... Location.

OUACHITA COUNTY

Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Sec. 36-12-18 ..... T.D. 1,015 ft.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW Sec. 3-4n-8w ..... Partly rigged up and S.D.

UNION COUNTY

E. H. Cassity, tr.'s No. 1 F. L. Dumas, 200 ft. N, 300 ft. W, SE cor. SE SW Sec. 10-17-16 ..... Drlg. 1,400 ft.
Graves, Ferguson & Fuller's No. 1 Patterson, SW cor. NE NE Sec. 31-19-16 ..... Began drlg. Dec. 23; cmtd. 10-in. 103 ft; S.D.
Mamie McCurry et al's No. 1 Rowland, 300 ft. N and E, SW cor. Sec. 9-19-11 ..... Derrick.
Pigeon Hill Oil Co.'s No. 1 Union Sawmill, 150 ft. S, 100 ft. E, NW cor. NE NE Sec. 9-17-13 ..... Coring 2,575 ft.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N¼ NE SE Sec. 3-18-13 ..... S.D. 1,678 ft.

WOODRUFF COUNTY

B. F. Thompson's No. 1 Rosser, 500 ft. N and E, SW cor. SE SE Sec. 7-8n-3w ..... Reported abd. in error; drlg. gumbo, shale and streaks of lime 732 ft.

YELL COUNTY
(Cable tools)

Rainbow Oil & Gas Co.'s No. 1 Barrett SE cor. NE NE Sec. 16-8n-24 ..... S.D. 278 ft.

## East Texas

BOWIE COUNTY

Roy Anderson et al's No. 1 Breckenridge, center 465-ac. Breckenridge tract in Nancy Dycus Sur. ..... Fishing bit 3,005 ft.
Tom Bell et al's No. 1 Mars, 1,980 ft. N, 2,140 ft. W, NE cor. 465-ac. tract in O. D. Watson Sur. ..... Drlg. 1,700 ft.
Lanford et al's No. 1 W. W. Whybark, 300 ft. S, 300 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 2,248 ft.

CASS COUNTY

Davis & Digg's (now Joiner Pet. Co.'s) No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Latimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.

HARRISON COUNTY

Great Eastern Oil Co.'s No. 1 Rudd, Wm. Steele Sur. .... 10-in. 96 ft; 8-in. 846 ft. small show gas 1,575 ft; S.D.
A. E. Roscoe et al's No. 1 Vever Towell, NW cor. H. T. Edwards' 340 acres in Louis Watkins Sur. ..... Cored Woodbine 3,000-16 ft.

MARION COUNTY

Bausch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Pulgram Sur. (was Gist, Claunch & Dodson) ..... Coring 3,540 ft.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S most northerly N line, 2,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.

Starling & Preston's No. 1 Henderson, R. Bennington Sur. H.R.S. ..... Drlg. chalk 2,570 ft.

PANOLA COUNTY

Carter-Skidmore et al's No. 1 C. J. Wooten et al, 785 ft. N, 185 ft. E, SW cor. C. J. Wooten tract in P. Martin Sur. ..... Location.

Hampton Drlg. Co.'s No. 1 Lloyd Thompson, 330 ft. N, 330 ft. W, NW cor. C. Flanagan Sur. in Allen Leach Sur. ..... Location.

Root-Skinner's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur. ..... S.D. for D.S. 740 ft.

J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr., James Hanks Sur. ... S.D. 3,055 ft.

RED RIVER COUNTY

Ajo Oil Co.'s No. 1 Nichols & Daniels, center S 730 acres of 1,300-ac. tract in Hugh B. Shaw Sur. ..... Location.

Concord Oil Co.'s No. 1 Dillahunty, 500 ft. N, 200 ft. W, SE cor. Robt. Glass Sur. ..... S.D. for fuel 2,837 ft. in lime.

L. S. Priest et al's No. 1 R. W. Peck, 500 ft. W, 900 ft. N, most southerly SE cor. 250-ac. tract in Abram Wagley Sur. ..... S.D. 1,302 ft.

SHELBY COUNTY

J. H. Francis' (now Bob Chew et al's) No. 1 John Mims, Mary Smith Sur. ..... Tested dry 2,842 ft; S.D. 2,488 ft.

General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Cored lime 4,005 ft; arranging to plug back to 3,870 ft. to test gas show.

Oil News' No. 1 Pickering, C. H. Patterson Sur. ..... Reaming 3,360 ft.

Nell Lease & Oil Well Synd.'s No. 1 W. P. Harvey, NW cor. W. P. Harvey 130 ac. in W. P. Harvey Sur. ..... Derrick pattern.

Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. and 200 ft. W from SE cor. 42-ac. tr., J. Burleson Sur. ... Arranging cmt. 4½-in..; T.D. 3,422 ft.

Ridgeway et al's (now Roy F. Smith's) No. 1 Polley, Dominguez Gonsales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tract .... S.D. 3,045 ft.

Redberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D. 2,375 ft.

Gray & Dunbar's No. 1 C. A. Hayden, 400 ft. N and W, SE cor. 153-ac. tr. in D. T. F. Yordt Sur. ..... S.D. for wtr. 2,280 ft.

## Louisiana-Arkansas Proven Areas

### North Louisiana

BOSSIER—BELLEVUE AREA

Company, well, farm name, section and block— Remarks:

H. I. Morgan's No. 2 Smith, 1,520 ft. N, 660 ft. W, SE cor., Sec. 22-19-11 ..... Fishing D.S. 3,969 ft; red beds.

CADDO—RODESSA AREA

United Gas Public Service Co.'s No. 1 Levee Board, 1,980 ft. N, 1,320 ft. E, SW cor. Sec. 27-23-16 ..... Drlg. lime 5,206 ft.

CADDO—BLANCHARD AREA

Louana O. & G. Co.'s No. 1 Carrie et al, 1,320 ft. W, 660 ft. S, NE cor. SE Sec. 32-19-16 ..... Tested estimated 5,000,000 ft. gas; arranging cmt. 6-in. 2,740 ft.

Louana O. & G. Co.'s No. 1 Waskom, 660 ft. N and E, SW cor. Sec. 29-19-16 ..... Set 10-in. 60 ft.

Pyramid Oil Corp.'s No. 2 C. C. Wheeler, 660 ft. S, 250 ft. E, NW cor. Sec. 4-18-16 ..... Derrick and moving in rig.

DE SOTO PARISH

Abernathy et al's No. 1 J. M. Nabors, 2,485 ft. E, 1,185 ft. N, SW cor. Sec. 32-13-11 ..... Drlg. chalk 1,480 ft.

SABINE PARISH—ZWOLLE

J. H. Askew's No. 3 Henderson, 400 ft. S, 150 ft. E, NW cor. SW SE Sec. 31-8-10 ..... Derrick.

H. H. Alvord's No. 1 Sabine State Bank, 320 ft. N and E, SW cor. NW SW Sec. 28-8-11 ..... Cmtd. 6-in. top marl 2,272 ft.

Baird Bros.' No. 3 Martinez, 1,012 ft. S, 907 ft. E, NW cor. NW SW Sec. 2-7-13 ..... Tested dry 3,410 ft.; arranging to deepen.

C. W. Beene et al's No. 1 Cutrer, 200 ft. N and E, SW cor. NW Sec. 12-7-11 ..... Derrick.

Brown Lbr. Co.'s No. 1 fee, 330 ft. E, 530 ft. N, SW cor. NW NE Sec. 1-7-11 ..... Rigging up.

Cameron Oil Co.'s No. 1 G. Martinez, 845 ft. E, 540 ft. N, SW cor. Sec. 2-7-13 ..... Cmtd. 6-in. 2,022 ft; T.D. 2,064 ft.

Capitol-Crescent Oil Co.'s No. 1 Sabine State Bank, 990 ft. E, 330 ft. N, SW cor. NW SW Sec. 2-7-13 ..... Derrick.

T. B. Carpenter's No. 1 Cutrer, 330 ft. S and E, NW cor. SE Sec. 12-7-11 ..... Cmtd. 6-in. 2,546 ft.

Corning Oil Co.'s No. 1 T. L. Andries, 415 ft. E, 365 ft. S, NW cor. NE SE Sec. 15-7-11 ..... Old well drilled to 100 ft. by Tuffree et al; rigging up.

Continental Drlg. Co.'s No. 1 Leone est., 70 ft. N, 200 ft. W, SE cor. Sec. 31-8-12 ..... Drlg. 1,515 ft.

Corporation Oil Co.'s No. 2 Eberle, SE SE Sec. 36-8-11.. Location.

Craig et al's No. 1 Ponder, 330 ft. N and E, SW cor. SE NW Sec. 15-7-11 ..... Began Dec. 12; S.D. 50 ft.

Crescent Drlg. Co.'s No. 1 Malbry, 660 ft. N and E, SW cor. SE NW Sec. 2-7-11 ..... Derrick.

Edwards & Hubler's No. 1 G. Martinez, 510 ft. S, 280 ft. E, NW cor. SW SW Sec. 2-7-13 ..... Derrick.

V. R. Hammons et al's No. 1 Travis, 540 ft. N, 150 ft. E, SW cor. NW SE Sec. 13-7-11 ..... S.D. chalk, 2,610 ft.

D. D. Holcomb's No. 2 Quayhagiew, 140 ft. N, 200 ft. E, SW cor. SE SE Sec. 11-7-11 ..... W.O.S.R. 2,652 ft.

R. L. Hunt's No. 2 Livingston, 330 ft. S and E, NW cor. SW NW Sec. 9-7-11 ..... Top marl 2,340 ft; cmtd. 6-in. 2,330 ft; T.D. 2,340 ft.

Investors Prod. Co.'s No. 1 S. J. Williams, 660 ft. E, 600 ft. S, NW cor. Sec. 24-7-11 ..... Location.

H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW Sec. 14-7-11 ..... Arranging acid test 2,660 ft.

Lion Oil Ref. Co., 104 ft. N and E, SW cor. SE NE Sec. 30-8-11 ..... Began drlg. Jan. 13; cmtd. 10-in. 40 ft; drlg. 1,430 ft.

Loring Oil Co.'s No. 21 Bowman-Hicks, 450 ft. S, 275 ft. E, NW cor. SW NW Sec. 16-7-12 ..... Fishing D.S. 5,439 ft.

Lowery & Green's No. 1 Adair, 330 ft. N and W, SE cor. SE SW Sec. 19-8-11 ..... Derrick.

Martin et al's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. NW SW Sec. 30-8-11 ..... Derrick.

L. K. McGuffin's No. 3 Chadick, 200 ft. S, 200 ft. W, NE cor. NW SW Sec. 32-8-10 ..... Location.

H. C. Moulding's No. 1 Brumley, 330 ft. N, 330 ft. E, SW cor. NW NW Sec. 2-7-11 ..... Began drlg. Jan. 8; cmtd. 10-in. 41 ft.

Paul L. Miller's No. 3 Chadick, 550 ft. N, 430 ft. E, SW cor. SE NW Sec. 32-8-10 ..... Began drlg. Jan. 11; cmtd. 10-in. 40 ft; fishing for bit; T.D. 1,700 ft.

C. D. Neff, tr.'s No. 3 Snell, 400 ft. E, 330 ft. N, SW cor. SE SE Sec. 9-7-11 ..... Top marl 2,368 ft; cmtd. 6-in. 2,370 ft; standing 1,100 ft. fluid; T.D. 2,588 ft; deepened to 2,650 ft; arranging test.

R. F. Neely's No. 5 Ponder, 580 ft. S, 870 ft. W, NE cor. Sec. 16-7-11 ..... Standing 700 ft. fluid; W.O. 2,563 ft.

Newlin & Cherry's No. 1 Turner, 109 ft. N, 330 ft. W, SE cor. Fractional NW NW Sec. 4-7-11 ..... Cmtd. 6-in. 2,222 ft.

Pelican Nat. Gas Co.'s No. 19 La. Long Leaf Lbr. Co., 330 ft. N and E, SW cor. SE ..... Rigging up.

H. L. Patton's No. 1 Ponder, 330 ft. N and W, C Sec. 15-7-11 ..... Top marl 2,376 ft; S.D.

Perkins & Babbin's No. 1 Hopkins, 240 ft. S, 270 ft. W, NE cor. NE SW Sec. 11-7-11 ..... Began drlg. Jan. 12; cmtd. 10-in. 41 ft; drlg. 1,747 ft.

G. N. Pharis, Tr.'s No. 1 Cutrer, 990 ft. S, 330 ft. E, center Sec. 13-7-11 ..... Derrick.

T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE Sec. 6-7-13 ..... Derrick.

Picayune Oil Co.'s No. 1 Porter, 330 ft. N and W, SE cor. NW SW Sec. 30-8-11 ..... Began drlg. Nov. 21; cmtd. 10-in. 40 ft.; S.D. 1,518 ft.

Pugh-Hickman Drlg. Co.'s No. 1 Blackman, 330 ft. N and E, SW cor. NW NW Sec. 30-8-11. ..... Location.

Sam Riggs, tr.'s No. 1 Darby, N half SE Sec. 21-7-11 ... Cmtd. 7-in. 2,504 ft; T.D. 2,556 ft.

Ritchey Prod. Co.'s No. 1 Stille, SE NW Sec. 36-8-13... Began drlg. Jan. 10; cmtd. 10-in. 40 ft.

Robertson Drlg. Co.'s No. 1 J. W. Hughes, 1,320 ft. W, C, Sec. 26-8-13 ..... Location.

Rotary Oil Corp.'s No. 1 Hale, 380 ft. S and E, NW cor. SW Sec. 1-7-13 ..... Cmtd. 6-in. 2,111 ft; drlg. chalk 2,424 ft.

C. T. Ruffin's No. 1 Lilly, 545 ft. S, 200 ft. W, NE cor. NW NW Sec. 8-7-11 ..... Show oil; bailed dry; W.O. 2,376 ft.

E. M. Self's No. 1 Newton, 330 ft. S and W, NE cor. NE SE Sec. 1-7-11 ..... Rig up.

Scully & Beach's No. 4 Lafitte, 325 ft. E, 197 ft. S, NW cor. SW NW Sec. 13-7-11 ..... Derrick.

Scully & Beach's No. 5 Lafitte, 413 ft. E, 190 ft. W, NE cor. SW NW Sec. 13-7-11 ..... Arranging swab through tubing 150 ft. in oil; T.D. 2,492 ft.

Service Drlg. & Royalties Corp.'s No. 2 Smith, Sec. 12-7-11 ..... Top marl 2,626 ft; cmtd. 6-in. 2,628 ft; arranging acid test; T.D. 2,814 ft.

Ben F. Smith's No. 4 Turner, NE cor. NE NW Sec. 4-7-11 ..... Derrick.

Simmons et al's No. 1 Fleming, E½ SE SE Sec. 11-8-13.. Rigging up.

Scully & Beach's No. 3 Lafitte, 1,030 ft. S, 134 ft. E, NW cor. Sec. 13-7-11 ..... W.O.S.R. 2,492 ft.

F. E. Stancil's No. 1 Pouder, 373 ft. S, 397 ft. E, NW cor. NE SE Sec. 10-7-11 ..... Arranging acid test; T.D. 2,593 ft.

State Prod. Co.'s No. 1 Keaxele, 150 ft. N and W, SE cor. NW SW Sec. 3-7-13 ..... W.O.S.R. 2,427 ft.

State Prod. Co.'s No. 1 Liles, 150 ft. S and W, NE cor. SE SW Sec. 28-8-11 ..... Derrick.

State Prod. Co.'s No. 1 Sabine Lbr. Co., 365 ft. N, 100 ft. W, SE cor. NW SW Sec. 3-7-13 ..... S.D. 2,427 ft.; 1,000 ft. oil.

The Texas Co.'s No. 1 C. E. Cooper, 403 ft. S, 175 ft. E, NW cor. NE SE Sec. 20-8-11. ..... Derrick.

The Texas Co.'s No. 1 Ponder, 1,490 ft. S, 200 ft. W, NE cor. Sec. 16-7-11 ..... Bailed small S.O.; arranging acid test; T.D. 2,365 ft.

E. M. Thomasson's No. 1 W. & H. Andries, 500 ft. N, 150 ft. W, center Sec. 22-7-11 ..... Cmtd. 6-in. 2,300 ft.

J. H. Watt et al's No. 1 Pouder, 200 ft. S, 135 ft. W, NE cor. NW NE Sec. 15-7-11 ..... Derrick.

B. R. White et al's No. 1 Cooper, 330 ft. S and E, NW cor. SW NW Sec. 32-8-11 ..... Derrick.

B. R. White et al's No. 1 Stille, 620 ft. W, 205 ft. N, SE cor. NE SW Sec. 35-8-13 ..... Drlg. 1,205 ft.

Zwolle Prod. Co.'s No. 1 Tatum, 550 ft. E, 330 ft. N, C Sec. 25-8-12 ..... S.D. fuel 1,500 ft.

### Arkansas

OUACHITA COUNTY—SMACKOVER

L. L. McDonald's No. 1 J. A. Robertson, 200 ft. S and E, NW cor. NE NW Sec. 25-15-16 ..... Derrick.

UNION COUNTY—URBANA

Graves, Ferguson & Fuller's No. 1 Patterson, SW cor. NE NE Sec. 31-19-16 ..... Derrick.

Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE ..... S.D. 1,730 ft.

### East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ..... S.D. 3,359 ft.

### Mississippi

HINDS COUNTY

Geo. P. Adkins et al's No. 1 Woodland Hills, 400 ft. N and W, SE cor. NW NE Sec. 26-6-1e ..... Derrick.

RANKIN COUNTY

J. A. Baker et al's No. 2 Rankin Side Dev. Co., Sec. 6-5-3e ..... S.D. high wtr.; top chalk at 3,461 ft.

J. A. Matson et al's No. 1 Warner, 1,100 ft. S, 200 ft. W, NE cor. W½ SE Sec. 14-5n-1e ..... Waiting on csg. 2,477 ft.

## Wildcat Operations in Alabama

BALDWIN COUNTY

(Cable tools)

Company, well, farm name, section and block— Remarks:

H. H. Givens' No. 1 Ashman, Sec. 10-6-5e ..... Drlg. 500 ft.

CULLMAN COUNTY

C. V. Corey's No. 1 King, NE cor. NE NW Sec. 35-8-4w.. S.D. 710 ft.

LAMAR COUNTY

De Soto O. & G. Co.'s No. 1 Gardner, NW NW Sec. 23-15s-16w ..... S.D.; shale 3,300 ft.

WASHINGTON COUNTY

South Ala. O. & G. Co.'s No. 1 Wilson, Sec. 26-1n-1w ..... S.D. in sand 2,959 ft.

## Wildcat Operations in Mississippi

AMITE COUNTY

Company, well, farm name, section and block— Remarks:

Magnolia State O. & G. Co.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e ..... S.D. 400 ft.

CLARKE COUNTY

F. X. Gowans et al's No. 1 Effring, SE NE Sec. 13-1n-14e. S.D. 104 ft.

COVINGTON COUNTY

Eastman Gardner Interest's (was Modisette Drlg. Co.) No. 1 Eastman-Gardner Lbr. Co., No. 1 Minerals fee, NE NW Sec. 29-9n-6w ..... Drlg. marl 1,400 ft.

HINDS COUNTY

Cleve Love's No. 2 Security Realty Co., 1,855 ft. N, 782 ft. E, SW cor. Sec. 36-6-1e ..... T.D. 2,447 ft; set 6-in.; drlg. plug.

Love & Lancaster's No. 1 Elton Plantation, C SE Sec. 17-4n-1e ..... S.D. Eutow (Blossom) 5,050 ft.

National Gas Co. of Miss.' No. 1 M. C. Halder, 160 ft. E, 660 ft. N, SW cor. Sec. 16-6n-1e ..... S.D. for csg. 810 ft.

JASPER COUNTY

B. B. Jones' No. 1 Bank of Philadelphia, 660 ft. N and W, SE cor. Sec. 35-3n-12e ..... Drlg. pyrites 4,095 ft.

JACKSON COUNTY

Gulf Ref. Co. of La.'s No. 1 Danciger, 2,440 ft. S, 1,120 ft. W, NE cor. Sec. 27-4s-8w ..... Began Dec. 6; core drlg.

LAMAR COUNTY

Chas. W. Gorr et al's No. 1 Jordan, NW cor. SW Sec. 1-3n-15w ..... Derrick.

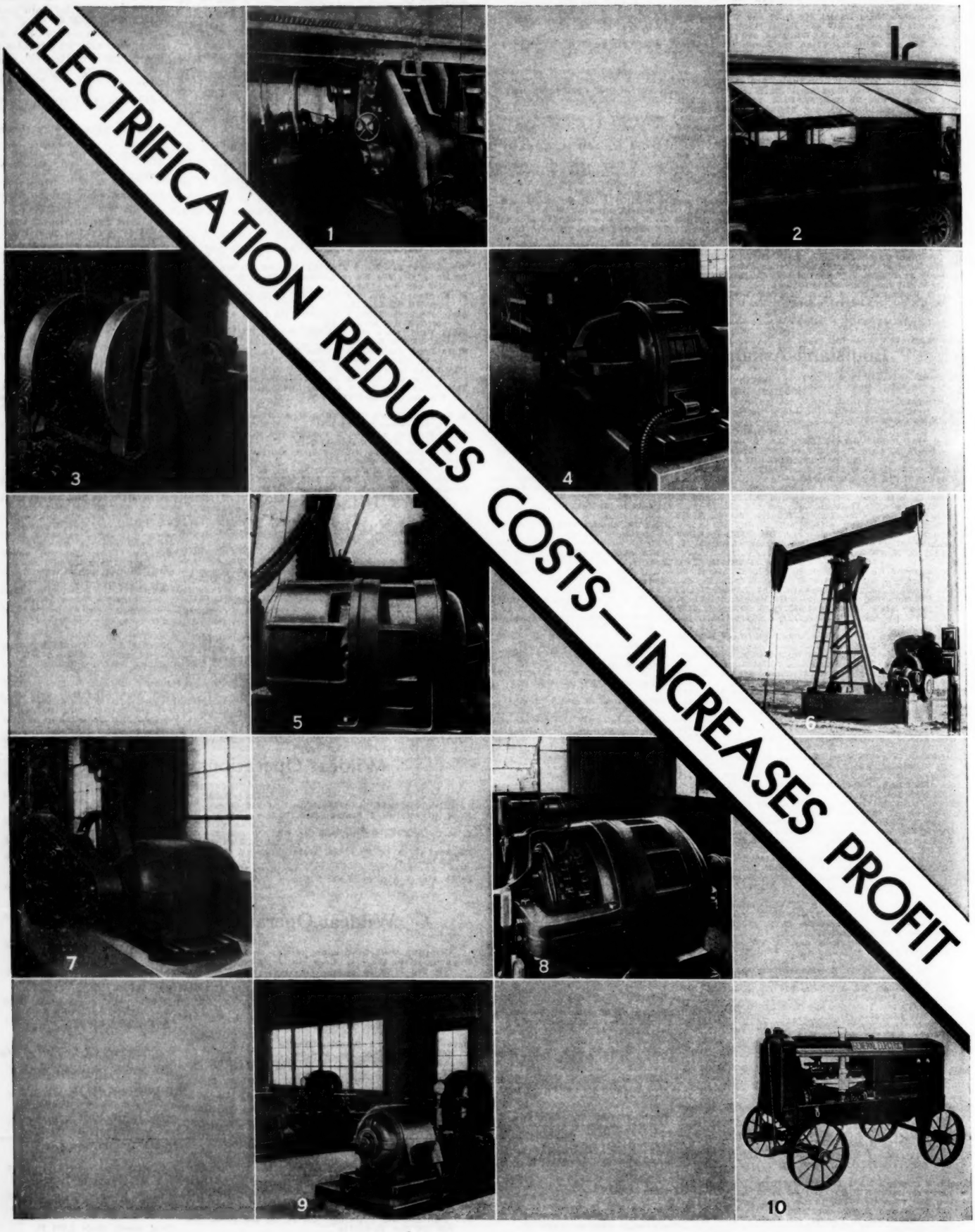
Stauffer & Kouri's No. 1 Bond, SE NE Sec. 18-3n-14w ... D.S. stuck 3,035 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 23-15s-17w ..... S.D. in lime 2,335 ft; high wtr.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE Sec. 25-6n-11e ..... Drlg. sandy shale 2,450 ft.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# HOW MANY

## OF THESE "MOVES" WILL YOU MAKE TO REDUCE 1933 OPERATING COSTS?

1. INDUCTION-MOTOR DRIVE FOR DRILLING RIGS . . . rotary or cable-tool. The means of making a substantial reduction in fuel and water bills.

2. DIRECT-CURRENT DRILLING EQUIPMENT with generator voltage control, for rotary rigs. When combined with internal-combustion-engine drive for the generators, it provides all the advantages of this prime mover and of electric power for wildcat drilling where electricity is not otherwise available. Suitable also for operation from any central-station power system, combining the economies of electric power with the flexibility of steam.

3. AUTOMATIC WEIGHT CONTROL . . . the outstanding development in automatic feed for rotary drilling of straight holes. Automatically holds constant weight on the bit, without loss in drilling time. Notable for its flexibility and versatility. Applicable to any rotary rig.

4. TYPE MTO, TWO-SPEED OIL-WELL PUMPING MOTOR . . . the one type of motor which is suitable for every power need of a producing well. Can be used with every type of rig. Flexible in control — efficient — powerful.

5. MOTORS FOR SLOW-MOTION OR STANDARD PUMPING RIGS . . . gear-motors for slow-motion pumping, double- or triple-rated motors for economical pumping over a wide range of loads, standard motors for specific pumping requirements, hoist motors for pulling rigs — in fact, in the complete line of G-E motors and control, you'll always find exactly the right combination for every pumping job.

6. TOTALLY ENCLOSED FAN-COOLED MOTORS . . . weatherproof if desired. Install them outdoors, or in the dustiest and dirtiest places, or where corrosive fumes are present, and forget them except for an occasional inspection. Reduce maintenance and save the cost of a building.

7. EXPLOSION-PROOF MOTORS AND CONTROL . . . tested and listed by the Underwriters for Class 1, Group D, hazardous locations. Ideal for refineries and gasoline pumping stations —in fact, wherever safety is paramount. They minimize installation and housing expense.

8. BTA MOTORS . . . The utmost refinement in a-c. adjustable-speed drive, providing fine speed control—manual, remote, or automatic. Particularly suitable for charging pumps and similar applications. The high efficiency at all speeds means low cost of power.

9. PIPE-LINE PUMPING EQUIPMENT . . . the motor-driven centrifugal pump is small and light, hence unequalled for ease in moving to new locations, saving time and expense. As a booster it takes the place of looping the line, or is the efficient means of maintaining constant pressure all the year.

10. ARC WELDERS . . . always valuable as construction or maintenance tools. For erecting oil-storage tanks, repairing breaks, welding pipes, etc., arc welding is *going places* in every division of the oil industry. Before buying any arc-welding sets, investigate the advanced machine which bears the G-E monogram.

*Investigate the value of these and other great profit builders offered by General Electric. G-E oil-field and refinery specialists in your nearest G-E office are always willing to render you assistance.*

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GENERAL ELECTRIC

RANKIN COUNTY

Home Oil Prod. Corp.'s No. 1 So. Jackson Land Co., 85 ft. S, 130 ft. W, NE cor. NW SW Sec. 23-5n-1e ..... S.W. and abd 2,500 ft.
Love Pet. Co.'s No. 2 Int. Lbr. Co., 450 ft. S and E, NW cor. Sec. 28-4n-2e ..... Drlg. chalk 2,670 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e.. Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9 ..... S.D. 750 ft.

SUNFLOWER COUNTY

Miss. O. & G. Dev. Co.'s No. 1 School land, 330 ft. N, 330 ft. W, SE cor. SE NE Sec. 16-20-4 ..... Began drlg. Jan. 15; drlg. 100 ft.

WEBSTER COUNTY

P. J. McAlpine's No. 1 Hensley, Sec. 15-21-11 ..... Cored Tuscaloosa 1,800 ft; S.D.

WILKINSON COUNTY

Foster Creek Oil Co.'s No. 1 Foster Creek Lbr. Co., Sec. 12-3n-2w ..... Drlg. 600 ft.

## Wildcat Operations in Southwest Texas

(Continued from Page 43)

O. L. Ray's No. 1 Thos. Dillon, 3,500 feet from NW line, 1,750 ft. from most southerly SW line of de Luna grant in southern part of county ..... Rigging up.
H. G. Venable's No. 2 F. Dulling, 1,500 ft. W of center of E line of tract ..... Location.
W. L. Whicker's No. 1 Bilhartz ..... Location N of No. 1 Strumberg, and W of No. 1 Carruth.

BLANCO COUNTY

H. T. McGee's No. 1 Forbes, cen. Sec. 167 ..... Rigging up.
Hardy Sitton's No. 1 Luders, 150 ft. from S line, 1,420 ft. from E line of James Stanford Sur. ..... T.D. 1,540 ft.; standing.

CALDWELL COUNTY

Louis Crouch's No. 1 Sue Neelan, 1,500 ft. to SE lines, 150 ft. from NE lines of 200-ac. tract in John B. Gray Sur. ..... T.D. 1,100 ft; S.D.
E. D. Herne's No. 1 M. C. and P. W. Jeffrey 126-ac. tract, 150 ft. from N and E lines of tract in James George Sur. ..... Set surface pipe, waiting for wtr
E. L. Hope and Joe Cole's No. 1 M. August, 150 ft. from NE line, 165 ft. from NW line of tract in A. Floyd Sur. ..... T.D. 90 ft; drlg.
J. W. Kemp's No. 1 George Vickery, 760 ft. from SE line, 300 ft. from NE line of tract in Squire Damon Sur. ..... T.D. 2,100 ft; on pump 10 to 20 bbls.
E. R. Thomas' No. 1 Alexander, 568 varas from NW lines, 334 varas from NE line of 158 acres in Spiller Sur. ..... T.D. 1,100 ft; drlg.

DIMMITT COUNTY

Motes-Campbell Co.'s No. 1 Denton, 150 ft. from E line, 250 ft. from S line of Tracts 33 and 34 in Sec. 60 of Denton Colony Subd. ..... Abandoned.

DUVAL COUNTY

Buchanan, Schoolfield & Frasher's No. 1 Pursch, 330 ft. to E and W lines of Sur. 115 ..... Spudded in.
Cowden et al's No. 1 State Bank of Alice, 209 ft. to S line, 1,450 ft. to W line of E. Valentine Sur. No. 26.. Steel derrick.
Huff & Kyle's No. 1 A. Roach, 865 ft. from E line, 45 ft. from S line of Blk. 7, Sur. No. 457 ..... T.D. 172 ft; drlg.
Ed Leach et al's No. 1 C. J. Bain, 330 ft. to S line, 330 ft. to E line of NW SW of Sur. 264 ..... Rigging up.
Magnolia Pet. Co.'s No. 1 Duval County Ranch Co., Sur. 208 ..... Derrick.
Newton et al's No. 1 Welder-Wood, 5,550 ft. from W line, 4,590 ft. from N line of Sur. 102 ..... Rigging up.
Plymouth Oil Co.'s No. 2 Hoffman, 1,320 ft. from SE line, 2,640 ft. from SW line of Sur. 117 ..... T.D. 1,295 ft; drlg.
C. P. Scott's No. 1 J. W. Kidd, 990 ft. from N and E lines of SE of Sur. No. 56 ..... T.D. 2,264 ft; cored sand.
Smith & Capps' No. 1 Peters, 330 ft. from S line, 340 ft. from W line of NE of Sur. No. 178 ..... T.D. 2,451 ft; comp. 20,000,000 ft. of gas.
Stanley Smith's No. 1 C. Pena, 330 ft. from S and W lines of Sur. No. 79 ..... T.D. 1,930 ft; tested 135 lbs. gas; to test again.
Wm. B. Stewart's No. 1 Duval County Ranch Co., 990 ft. to S and E lines, of NE of Sur. 362 ..... Rigging up.
Wm. B. Stewart's No. 2 Duval County Ranch Co., 330 ft. from N and W lines of N½ SW of Sur. 362..... Moving in.
S.R.C. Oil Co.'s No. 1 Duval County Ranch Co., 150 ft. from N line, 4,200 ft. from W line of Sur. 192..... Rigging up.
Sun Oil Co.'s No. 2 Duval County Ranch Co., 1,320 ft. to E line, 672 ft. to N line of Sur. 254 ..... Rigging up.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Halff & Oppenheimer, 1,200 ft. from N line, 300 ft. from E line of W. F. Haisel Sur. ..... T.D. 6,200 ft; drlg.
James E. Greenlee's No. 1 W. W. Burns, 612 vrs. to N line, 900 vrs. to W line of Antone Hutzler Sur. ..... Rigging up.

GILLESPIE COUNTY

Rod Lagra's No. 1 Stephen, 500 ft. from N and W lines of A.B.&M. Sur. No. 969 ..... Spudded in.

GUADALUPE COUNTY

B. E. Brock's No. 1 Ogletree, 1,500 ft. from W line, 450 ft. from S line of tract in Robert Smith Sur..... T.D. 2,190 ft; drlg. lime.
Keene & Russell's No. 1 Lowman, 300 ft. from E line, 350 ft. from N line of tract in George Allen Sur. .... T.D. 380 ft; standing; to be completed by Clint Lanier.
W. A. Scrutchin's No. 1 S. J. Lowman, 170 ft. from N line, 195 ft. from W line of 10-ac. tract, in Blk. 1, Sec. No. 1 of S. J. Barnes Sur. ..... T.D. 410 ft; drlg.
O. R. Seagraves' No. 1 Krueger, 150 ft. to N and W lines of 58.75 acres in John G. King Sur. 15..... Rigging up.
Smith's No. 1 Lowman, offsetting old test of Humble.. T.D. 400 ft; standing.
Walton et al's No. 1 Dan Darling, 1,890 ft. from NW line, 1,198 ft. from SW line of Ben Fuqua Sur. ..... T.D. 216 ft.; S.D. to clear title.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.

GONZALES COUNTY

Antibus et al's No. 1 James, 6,350 ft. from N line, 1,300 ft. from E line of Mary A. Williams Sur. ..... T.D. 2,480 ft; S.D.
Edmiston & Kirby Pet. Co.'s No. 1 J. W. Ward, Jr., 300 ft. from N line, 833 ft. from W line of tract in Dan McKay Sur. ..... T.D. 1,592 ft.; standing.
A. King's No. 1 F. Ramsinski, 1,021 ft. from N line 1,320 ft. from E line of tract in Gonzales Townsite Sur. ..... Spudded in.
Luling O. & G. Co.'s No. 1 Gov. Hastings, 150 ft. to NE and SE lines of 58-ac. tract in Isaac Baker Sur., 1 mile south of Sampie ..... Rigging up.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft. S.D.
Palm City Pet. Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 1,445 ft.; drlg.
Dayle L. Smith's No. 3 Daskam, SW part of county..... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Cole Pet. Co.'s No. 1 W. Allen, 990 ft. to E line, 1,320 ft. to N line of Blk. 13, Randado grant ..... T.D. 3,302 ft; drlg.

JIM WELLS COUNTY

Humble Oil & Ref. Co.'s No. 1 Fuhrkin, 1,117 ft. from N line, 450 ft. from W line of 150.77-ac. tract in Phillips Sacks Sur. ..... T.D. 3,480 ft; drlg.
F. A. Lain's No. 1 Vernon Porter, 300 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... T.D. 3,611 ft.; standing.

KARNES COUNTY

A. E. Edmiston's No. 1 G. W. Cross, 500 ft. from E line, 150 ft. from N line of tract in M. N. Reed Sur. ..... Spudded in.
Hindeman et al's No. 1 F. C. Weinert ..... Spudded in, S.D.
H. J. Porter et al's No. 1 Reasoner, 1,800 ft. to S line, 650 ft. to E line of 125-ac. tract ..... T.D. 2,267 ft; S.D. for fuel.
Tippett & Mull's No. 1 Smith, 3,500 ft. from N line, 200 ft. from E line of Francis Haskins Sur., 2¼ miles E of Helena ..... T.D. 20 ft; drlg. shale.

KENDALL COUNTY

Dupree et al's No. 1 Hagg, 600 ft. to S line, 2,700 ft. to W line of tract, B.B.B.&C. Sur. 91 ..... Location.
Verland Trust's No. 2 Willie Werner, 1,400 ft. N and 150 ft. W of No. 1 P. B. Sterling's No. 1 Willie Werner ..... T.D. 935 ft; will shoot with nitro.

KERR COUNTY

Eastland Oil Co.'s No. 1-C Jeff Love, 150 ft. from S and E lines of C.C.S.D.&R.G.N.G. Sur. No. 1,595 ..... T.D. 2,542 ft; U.R.
Evans & Gant's No. 1 Estelle Young, 150 ft. out of NW cor. of Sec. 28, E. A. Burge Sur. ..... T.D. 3,500 ft; drlg. no sand.
Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of James R. Bettner Sur... T.D. 690 ft; drlg. sand.
Verde Oil & Gas Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,922 in Hamilton Sur. ..... T.D. 118 ft.; standing.

KLEBERG COUNTY

Harris et al's No. 1 Dennett, 600 ft. from S line, 760 ft. from E line of Blk. 7, Sec. 38, Kleberg Town & Imp. Co. Subd. ..... T.D. 2,230 ft; coring.
H. Carter's No. 1 R. H. Simmons, 150 ft. from S and W lines of tract in Sec. 7, King Sur. No. 3..... T.D. 3,205 ft.; standing.

LA SALLE COUNTY

Interstate Oil Industries, Inc.'s No. 1 J. F. Mayes, 600 ft. from S and W lines of Blk. 20, I.&G.N. Sur. No. 19 ..... T.D. 2,825 ft; standing.

LIVE OAK COUNTY

Carroll Brown's No. 1 Beckley, 1,800 ft. E along N line of T. B. Sparks Sur., from NE cor., thence 150 ft. at right angles, L. J. Sparks Sur. ..... T.D. 1,050 ft; drlg.
J. A. Harper's No. 2 fee, center of Blk. 40 ..... Location.
H. A. Pagenkopf's No. 1 Nichols, 850 ft. to W of E line, 450 ft. S of E line, Bridget Haughtey Sur. ..... T.D. 761 ft.: drlg.
C. J. Webster Oil & Gas Co.'s No. 1 C. F. Akers, 300-ac. tract in T. Henry Sur. ..... T.D. 100 ft.; standing

LEE COUNTY

Paton Bros.' No. 2 Turner, 150 ft. due SE of No. 1-A Turner, junked at 5,675 ft. in the David Hudson Sur., 2 miles SE from Tanglewood ..... Location.

MAVERICK COUNTY

B. R. Garrett and Mason Altgelt's No. 1 J. D. Beck, 730 ft. N of S line, 2,778 ft. W of E line, about 1½ miles north of Eagle Pass on Del Rio Highway, Sur. 44 ..... T.D. 110 ft; drlg.
H. E. Lewis' No. 1 Kifuri, 640 varas E of river, 140 varas from S line of Poindexter & Burns Sur. 31 .... Location.

McMULLEN COUNTY

L. W. Capps' No. 1 Hagist, 1,650 ft. from N line, 2,640 ft. from E line of Sec. 6, J. W. Osborne Sur. ..... Location.
Homer T. Lamb's No. 1 J. T. Brown, 150 ft. to N line, 2,450 ft. to W line of 692-ac. tract in M. Hely Sur... Location.
Howeth & O'Neill's No. 1 Roos Bros., 150 ft. from N line, 650 ft. from W line of Sec. 30, Rhodes ranch, Beatty, Seale & Forwood Sur. ..... T.D. 3,001 ft; standing; contract depth.
Jaqua & Crow's No. 1 Hagist, 330 ft. from N and W lines of R. W. Mills Sur. No. 467 ..... Ready to resume.
Chas. B. Loftin's No. 1 R. H. Brown, in R. H. Brown Sur. No. 8 ..... T.D. 715 ft; drlg.
Plymouth Oil Co.'s No. 1 Miles Ranch, Sur. 149 ..... Making location.
C. Shumway's No. 1 Shiner, 400 ft. from W line, 200 ft. from N line of Blk. 45 of Shumway Subd. of Shiner ranch ..... T.D. 370 ft.: S.D.
S. R. C. Oil Co.'s No. 1 La Chusa, 1,320 ft. to S and E lines of Sur. 47 ..... Location.

MEDINA COUNTY

James E. Greenlee's No. 1 Feasler, 600 ft. from N line and 2,400 ft. from E line of L. G. Harrison Sur. No. 799 ..... T.D. 1,230 ft.; standing.
Moore, Richey & Clifton's No. 1 Reicherers, 150 ft. from N and W lines of tract, SW of Lacoste ..... Set surface csg.
F. Ryal's No. 1 G. Martin, 150 ft. from S and W lines of Blk. 368, H. Castro Sur. ..... Spudded in and S.D

MILAM COUNTY

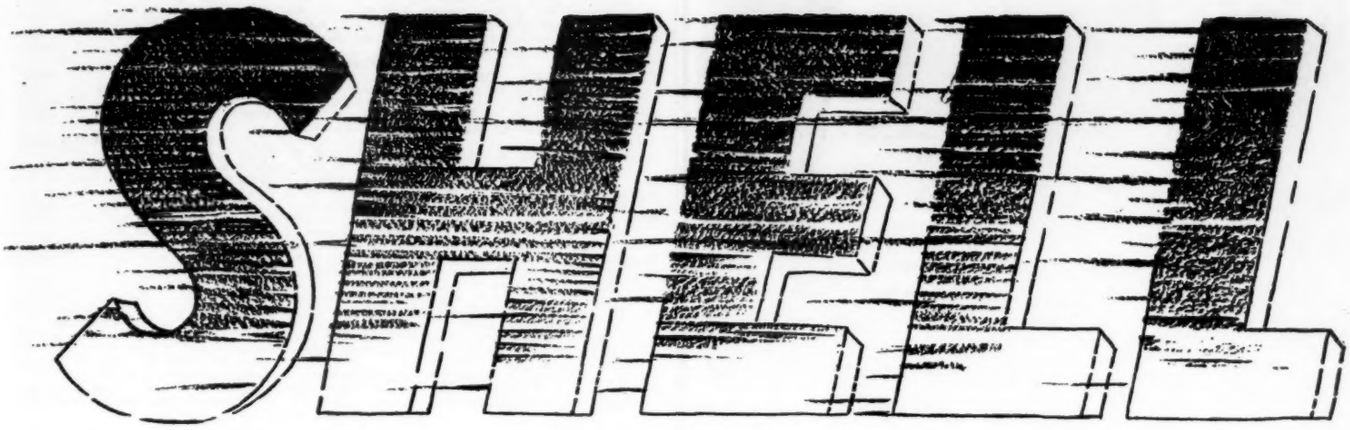
Bridwell's No. 1 Terry, 1,100 ft. from N line, 800 ft. from W line of tract in Jose Leal Sur. ..... T.D. 2,460 ft; S.D.
Clark et al's No. 1 Hoppe, 450 ft. to NE lines, 450 ft. to SE lines of E. Hoppe 60-ac. tract in Juan Jose Acosta Sur. ..... Rigged up and S.D.
Ed Clark's No. 1 Pritchard, 1,100 ft. to SE lines, 700 ft. to NE lines of 163-ac. tract in F. Ernst Sur., 6½ miles NE Thorndale ..... Rigged up.
Marvel Wells, Inc.'s No. 1 fee, center of 5-ac. tract out of Wm. Henits 133.3-ac. tract in J. J. Liendo Sur.. T.D. 2,435 ft; flowing sulphur wtr.; drlg. ahead.

NUECES COUNTY

Miller et al's No. 1 Harney, 200 ft. from NW line, 1,850 ft. from SW line of 445-ac. tract in Gregoria Farias Sur. ..... Moving in tools.
George Noble's No. 1 Homeland Syndicate, 300 ft. to SE and SW lines of Blk. 8, Sec. 12, 5 miles S Corpus Christi ..... Location.

STARR COUNTY

Adams & Modest's No. 1 Wood, 2,070 ft. from W line of Porcion 84, Camargo, and 1,472 ft. N of Missouri Pacific Railroad ..... Spudded in.
W. P. Chancellor's No. 1 A. Guerra, 26,000 ft. from S line, 2,600 ft. from E line of Share 6, of San Jose grant ..... T.D. 760 ft.; drlg.
B.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... T.D. 4,520 ft; cored gas sand; ream to set csg.
D. H. Carpenter's No. 1 Salinas, 3,087 ft. from N line, 1,321 ft. from E line of Share 85 of partition of Porcions 38, 39, 40 in Jurisdiction of Reynosa ..... T.D. 3,500 ft; S.D; contract depth.
Coastal O. & G. Co.'s No. 1 Kelsey Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. T.D. 1,860 ft.; changing to heavier rig.
Goodwin & Yantis' No. 1 Walker, 450 ft. SE of W line of Isabel Lopez property in Sur. 767 ..... T.D. 175 ft; drlg.
Goodwin & Yates' No. 1 Kelsey Bass, 150 ft. to N and W lines of Blk. 45, Sur. 2, Por. 86 ..... Location.
Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE of NW of Sur. No. 344 ..... T.D. 1,076 ft; drlg.
Great Plains Oil Co.'s No. 2 Sanches, 2,050 ft. to S line, 1,645 ft. from most westerly W line of Sur. 344 Rigging up.
Jeffries and Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Jurisdiction of Camargo ..... T.D. 1,522 ft; drlg. in.
Boyd C. Jones' No. 1 Garza, 2,407 ft. from N and E lines of Share 26, Part. of Porcions 67-72, Jurisdiction of Mier ..... T.D. 560 ft; drlg.
LaJoya Oil & Gas Co., in Porcion 29, NE part of county.. Location.
A. C. McGahhey's No. 1 Fernandes Bros., 1,800 ft. from W line, three-quarters of a mile from Rio Grande River, in Porcion 99, Jurisdiction of Camargo ..... T.D. 180 ft.; drlg.
D. A. Miller's No. 1 Madrigal, 4,527 ft. to N line, 1,987 ft. to E line of Share 15, Porcions 67, 72, 1 mile NE of Roma ..... T.D. 105 ft.; no report.
John Pope, trustee's No. 2 H. Gonzales, 150 ft. W of cen. of E line of Sur. No. 339 ..... Spudded in.

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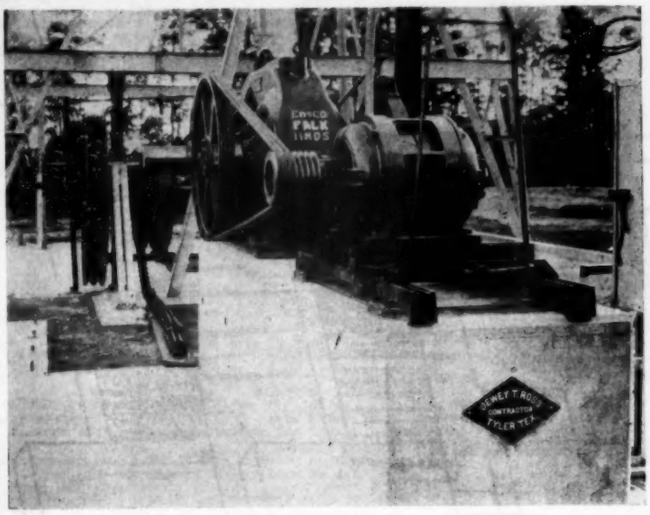


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J. W. Seaward's No. 1 F. Dawson, 495 ft. from W line, 240 ft. from S line of tract in Blk. 6, Share 3-B of Porcion No. 79 ..... Location.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... T.D. 278 ft.; no report.
Travelers Oil Co.'s No. 1 C. Ramos, 2,000 ft. from SW lines, 2,640 ft. from NW lines of Sur. 150 ..... Location.

**TRAVIS COUNTY**

J. L. Collins & Co.'s No. 1 John Carlson, 630 ft. to NE lines, 1,570 ft. from SE lines of 177-ac. tract in M. W. Smith Sur. ..... T.D. 950 ft; reaming.
Franklin et al's No. 1 Reimer, 1,200 ft. from SE line, 1,400 ft. from most southerly SW line of Sur. 35 .. T.D. 220 ft.; S.D.
Fritz Fuch's No. 2 Wm. Smith, 150 ft. from NE line, 750 ft. from NW line of N 113 ac. in L. Kimbro Sur.. T.D. 760 ft.; fishing.
Robinson et al's No. 1 O. L. Brady, 155 ft. to N line, 300 ft. to W line, McMillan Sur. ..... Location.

**UVALDE COUNTY**

J. V. Scoggin's No. 1 Olive Henry, 1,100 ft. from N and E lines of tract in Hugh Kilgore Sur. ..... T.D. 670 ft.; S.D.

**WEBB COUNTY**

J. W. Edwards' No. 1 M. D. Slator, 1,320 ft. to NE and NW lines of Blk. 72, Slator Subd. of J. V. Borrego grant ..... T.D. 2,050 ft; standing.
O. W. Killam's No. 6 Bruni, 150 ft. S 55 deg. W from S cor. of Sur. 18, Ranchita Pasture, Borrego grant.. T.D. 1,958 ft; drlg.

**WILLIAMSON COUNTY**

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract in B. Manlove Sur. ..... T.D. 1,669 ft; S.D.
E. F. Smith's No. 1 H. C. Braker, 1,600 ft. to SW lines, 900 ft. to NW lines of E. J. Mahan Sur. ..... T.D. 513 ft.; S.D.

**ZAPATA COUNTY**

Hamilton, Brower & Crow's No. 1 Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Subd. of Slator ranch in J. V. Borrego grant ..... Location.
Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700-ac. of Share A, Charco Redondo grant ..... T.D. 1,143 ft; standing.
T. J. Murray's No. 1 S. Vela, 285 ft. from NE line, 158 ft. from SE line of Blk. 145, Doty Subd., Share 4, El Grullo grant ..... Rigging up.
Phelps, Taegel & Leyendecker's No. 1 Martinez, 150 ft. to N and W lines of Blk. 15 of S. T. Phelps, Jr. Subd. "A" of Villa grant ..... T.D. 1,965 ft; testing.

**ZAVALA COUNTY**

Adair & Daniel's No. 1 Gates, 1,320 ft. from N line, 1,220 ft. from E line of Hooper & Wade Sur. No .13.. T.D. 3,920 ft; standing.

## Southwest Texas Proven Areas

**Week Ending January 21**

JACOBS POOL—ATASCOSA COUNTY

| Company, well, farm name, section and block— | Remarks: |
|---|---|
| Jacob, Buzzini & Pickett's No. 1 Roundtree, 330 ft. from NE and SE lines of W½ of J. Pointevant Sur. 1. | Moving in tools. |

RIDDLE POOL—BASTROP COUNTY

| | |
|---|---|
| Ogden & Reed's No. 8 Riddle, 600 ft. S and E of No. 1 Riddle in 94.5-ac. tract in Joshua Gray Sur. ..... | Clearing site. |
| Ogden & Reed's No. 1 Miers, beginning at the intersection of the C. L. Riddle and W. M. and Viola Riddle tracts, thence W 300 ft., thence S at right angles 150 ft. in W. H. Leech Sur. ..... | T.D. 2,285 ft; coring lime and Serpentine. |
| Ogden & Reed's No. 2 J. W. Mears, 600 ft. W of No. 1 Leach Sur. ..... | Location. |
| Ogden & Reed's No. 2 Riddle, 600 ft. N of No. 1, J. Gray Sur. ..... | Location. |
| Ogden & Reed's No. 3 Riddle, 600 ft. N of No. 2, J. Gray Sur. ..... | Location. |
| Ogden & Reed's No. 4 Riddle, 600 ft. S of No. 1, J. Gray Sur. ..... | Location. |
| Ogden & Reed's No. 5 Riddle, 600 ft. E of No. 3, J. Gray Sur. ..... | Location. |
| Ogden & Reed's No. 6 Riddle, 600 ft. E of No. 2, J. Gray Sur. ..... | Location. |
| Ogden & Reed's No. 7 Riddle, 600 ft. E of No. 1, J. Gray Sur. ..... | Location. |

NORMANNA POOL—BEE COUNTY

| | |
|---|---|
| Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... | T.D. 4,060 ft; coring. |

PETTUS FIELD—BEE COUNTY

| | |
|---|---|
| J. L. Mauldin's No. 3 fee, 300 ft. S of No. 1 fee, George A. Kerr Sur. ..... | T.D. 3,881 ft; drlg. in. |
| Slick-Seeligson's No. 8 Ray, 800 ft. from SE line, 300 ft. from NE line of company lease in George A. Kerr Sur. ..... | T.D. 3,035 ft; drlg. |

TULETA POOL—BEE COUNTY

| | |
|---|---|
| Conservative Oil Co.'s No. 1 Cloutts, 165 ft. from W line, 150 ft. from N line of SW SW SW Sec. 2, of Ragsley Subd. of Miller ranch in Uranga Sur. ..... | T.D. 4,315 ft; drlg. Yegua S.W. |
| Taber et al's No. 1 Harris, 150 ft. from N and W lines of Blk. 13, Sec. 13, Ragsley Subd. of Uranga grant .. | T.D. 4,328 ft; re-completing. |
| The Texas Company's No. 2 Cox, 250 ft. from S and W lines of SE of SW of SW of Sec. 2, Ragsley Subd. of Uranga tract ..... | Location. |

GAS RIDGE—BEXAR COUNTY

| | |
|---|---|
| American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriguez Sur. ..... | T.D. 2,230 ft.: standing. |

ECKERT POOL—BEXAR COUNTY

| | |
|---|---|
| Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tract in A. Manachaca Sur. 51. | T.D. 1,216 ft.: standing. |
| E. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montez Sur. ..... | T.D. 825 ft.; standing. |
| F. H. Eckert's No. 1 Adolph Brehm, 150 ft. to S and E lines of tract in west part of Boquar Sur. ..... | Moving in rig. |
| F. H. Eckert's No. 6 Louis Brehm, 320 ft. S of No. 5, 150 ft. to S line, 480 ft. to E line, Boquar Sur. ..... | Moving in rig. |
| Gatlin Oil Co.'s No. 15 I. A. Beck, 150 ft. from S and E lines of tract in J. Montez Sur. ..... | Location. |
| W. R. Swearingen's No. 11 Halbardier, 400 ft. SE of No. 10 Halbardier, J. F. Perez Sur. ..... | Location. |

DUNLAP POOL—CALDWELL COUNTY

| | |
|---|---|
| Bob Rose's No. 2-B Walker 46-ac. tract, 360 ft. from NW line, 500 ft. from SW line of tract in Solomon Seal Sur. ..... | T.D. 2,372 ft.; waiting for pump. |

SALT FLATS—CALDWELL COUNTY

| | |
|---|---|
| Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. .. ..... | T.D. 2,363 ft; S.D. |

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

| | |
|---|---|
| Buckner & Graham's No. 1, Sur. 55 ..... | Location on 35-ac. strip off east side of Sur. 55. |
| Buckner & Graham's No. 1, 330 ft. to S and E lines of SE NE of Sur. 41 ..... | Rigging up. |
| R. B. Byrd's No. 4 Wright, 1,086 ft. from W line, 330 ft. from S line of Sur. No. 101 ..... | T.D. 2,332 ft; drlg. in; looks dry. |
| R. B. Byrd's No. 5 Wright, 330 ft. from N line, 1,470 ft. from W line of Sur. 101 ..... | Location. |
| Central Powers, Inc.'s No. 5 Tuck-Johnson, 330 ft. from N and W lines of SE SW Sur. 42 ..... | T.D. 2,295 ft; comp. 15 bbls. hrly. |
| H. H. Coffield's No. 5 H. Wendt, 310 ft. to E line, 330 ft. to S line, SE NE Sur. 45 ..... | Derrick. |
| W. T. Daniels' No. 1 F. J. Smith, 330 ft. from N and W lines of SW of NE of Sur. No. 46 ..... | T.D. 900 ft; waiting on boiler. |
| Highland Oil Co.'s No. 6 Lundvall, 660 ft. to E of No. 5, Sur. 42 ..... | T.D. 2,280 ft; set csg.; W.O.C. |
| Highland Oil Co.'s No. 7 Lundvall, 330 ft. to N and E lines of S½ of NE of Sur. 42 ..... | Location. |

Highland Oil Co.'s No. 8 Lundvall, 330 ft. to S and E lines of S½ of NE of Sur. 42 ..... Location.
Luse & Russ' No. 4 Hahl, 330 ft. to S and E lines of NW of SE of Sur. 45 ..... T.D. 2,319 ft; drlg. in.
Edwin M. Jones' No. 1 Luptak, 150 ft. to S and E lines of NE NE of Sur. 41 ..... Rigging up.
Magnolia Pet. Co.'s No. 4 J. V. Allen, 330 ft. to S and W lines of S½ SE Sur. 42 ..... T.D. 2,290 ft; comp. 12 bbls. hrly.
Magnolia Pet. Co.'s No. 3 Brodbeck, 330 ft. from N and E lines of W½ NW NE Sur. 44 ..... Location.
Magnolia Pet. Co.'s No. 3 White, 330 ft. from N and W lines of Sur. No. 64 ..... Location.
Magnolia Pet. Co.'s No. 1 Hahl-Welderkehr, 330 ft. to S and E lines of N½ NW of Sur. 45 ..... Location.
Magnolia Pet. Co.'s No. 3 J. W. Riley, 330 ft. to N and E lines of SE SW of Sur. 45 ..... Location.
Reynosa Oil Co.'s No. 3 C. W. Hahl, 330 ft. to N and W lines of N½ NE of Sur. 42 ..... T.D. 2,248 ft; drlg.
San Diego Oil Corp.'s No. 5 E. Riley, 330 ft. from S and W lines of NW NW of Sur. No. 46 ..... T.D. 2,286 ft; drlg. in.
San Diego Oil Corp.'s No. 2 L. Bennett, 500 ft. N of No. 1, 250 ft. to W line of SE SW of Sur. No. 44.... Location.
San Diego Oil Corp.'s No. 4 E. Riley, 230 ft. from N line, 550 ft. from W line of NW NW of Sur. No. 46.. T.D. 2,270 ft; set csg.
San Diego O. & G. Co.'s No. 2 Heller, 200 ft. to S and W lines of SW SE of Sur. 44 ..... Location.
Seacord & Putnam's No. 1 Lundell, 330 ft. from S and E lines of NW of NE of Sur. No. 60 ..... Derrick.
The Texas Company's No. 3-A Wendt, NW Sur. 42 ..... T.D. 2,291 ft; comp. 20 bbls. hrly.
The Texas Company's No. 3 Riggs, 200 ft. from N and E lines of NE of NW of Sur. No. 46 ..... T.D. 2,200 ft; drlg.
The Texas Co.'s No. 5 Johnson, 330 ft. to S line, 990 ft. to W line of N½ SW of Sur. 42..... T.D. 2,281 ft; comp. 15,000,000 ft. gas.
Whisenant et al's No. 5 Hahl, 330 ft. to N and W lines of SW SW of Sur. 44 ..... Location.
Wilkins Seacoard's No. 1 Lundell, 330 ft. to S and E lines of NW of NE of Sur. 60 ..... T.D. 780 ft; drlg.
Windsor Oil Co.'s No. 3 Cummings, 210 ft. from N line, 330 ft. from E line, E½ NW NE Sur. 44 ..... Location.

**SOUTH GOVERNMENT WELLS FIELD—DUVAL COUNTY**

Humble Oil & Ref. Co.'s No. 10 White, 330 ft. to S line, 1,650 ft. to E line of Sur. 249 ..... T.D. 2,230 ft; set csg.

**SARNOSA FIELD—DUVAL COUNTY**

Atravasada Oil Co.'s No. 1 P. Henrandez, 330 ft. to NW and SW lines of E half of Sur. 574 ..... T.D. 970 ft; standing.
Sarnosa Oil Corp.'s No. 5 Well, 660 ft. due S of No. 4.... T.D. 2,429 ft; drlg. in; running tubing.
Smith & Capps' No. 4-A Duval County Ranch Co., Sur. No. 574 ..... Location.
Sun Oil Co.'s No. 2 Cuellar (Cano), 150 ft. from SW and SE lines of E quarter of Sur. No. 576..... Rigged up.
The Texas Co.'s No. 3-A Duval County Ranch Co., 1,053 ft. to SE lines, 330 ft. to SW lines of N¼ of Sur. 574 ..... T.D. 1,470 ft; drlg.

**DARST CREEK FIELD—GUADALUPE COUNTY**

John F. Camp's No. 3 Sue Denman, 1,025 ft. S of road, 540 ft. to E line of tract in Wm. Arrington Sur. .... T.D. 3,075 ft; drlg. lime and shale.

**SAL-MAR FIELD—GUADALUPE COUNTY**

A. H. Barnholl's No. 1 Chas. Woehler, 300 ft. to N and E lines of 138-ac. tract in G. W. Williams Sur. No. 46.. Derrick.
A. W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur..... Derrick.

**HORD'S CREEK—GOLIAD COUNTY**

Sam Vanderweiss' No. 1 Kaufman, 3,700 ft. NE of NE line of B. Merrill Sur., 300 ft. NW of NW line of Vincente Ramos Sur. ..... T.D. 4,310 ft; set gave away; cored deeper; will test again.

**ALWORTH FIELD—JIM HOGG COUNTY**

H. C. Cate's No. 1 B. J. Leyendecker, 70 ft. to E line, 320 ft. to S line, Blk. 10, Sur. 143 ..... T.D. 1,132 ft; standing.

**SANDIA POOL—JIM WELLS COUNTY**

Crude Oil Royalty Co.'s No. 1 Allen (first carried as Hughes & Long's No. 1 Wade), Cen. Blk. 2, Wade ranch ..... Rig on ground.
Larcro Gas & Pet. Co.'s No. 3 Wade, 2,000 ft. S, 33 deg. W of No. 2 Wade, thence 1,970 ft. N. 57 deg. W.... Material on ground.

**WERNER POOL—KERR COUNTY**

Sterling O. & G. Co.'s No. 2 Willie Werner, 470 ft. N, 150 ft. W of No. 1 ..... T.D. 935 ft; drlg.

**JACOB POOL—McMULLEN COUNTY**

Lefevre & Spice's No. 1 Jacob, 2,666 ft. to S line, 1,260 ft. to E line of J. Poitevent Sur. 53 ..... Location.
Longhorn Oil Co.'s No. 2-A Lark, 660 ft. N of No. 1-A Lark ..... T.D. 200 ft; drlg.
Tarver & Nance's No. 1 J. Dickinson Farm Mtg. Co., 150 ft. to E line of McMullen County, 200 ft. to NW lines of tract, or 200 ft. SE of SE line of Campbell Berry Sur. ..... T.D. 620 ft; drlg.

**ADAMS FIELD—MEDINA COUNTY**

Yantis Oil Co.'s No. 1-A Adams, 50 ft. from No. 1 ..... T.D. 680 ft.; S.D.

**SAXET FIELD—NUECES COUNTY**

Capps and Smith's No. 1 Hutchins, 330 ft. from S and E lines of 80-ac. tract in George Frank Sur. No. 416.. T.D. 5,004 ft; sidetracked; drlg. 3,980 ft.
Gibson Oil Co.'s No. 1 F. J. Smith, 330 ft. to S and E lines of Shepherd Farm Lots No. 35 ..... Rigging up.
Gulf Coast Oil Co.'s No. 2 Perkins & Lagasse, 650 ft. from N line, 990 ft. from E line, Sec. 26, Shepherd farm lots ..... T.D. 5,060 ft; plugging back.
Gulf Port Oil Co.'s No. 1 Isencee, 330 ft. to N and W lines of 300-ac. tract in C. Land Sur. ..... Location.
Gulf Port Oil Co.'s No. 3 Frank Bliss, 1,699 ft. to N line, 350 ft. to E line of 235-ac. tract in J. W. Stevens Sur. No. 406 ..... T.D. 3,795 ft; drlg.
Gulf Port Oil Co.'s No. 2 Humphreys (first carried as No. 2 Smith), 330 ft. S and E lines of Sur. 406 ..... T.D. 3,434 ft; standing.
Houston Oil Co.'s No. 2 McGregor, 600 ft. W of No. 1.... T.D. 4,290 ft; coring hard sand.
Shasta Oil Co.'s No. 1 Quiros ..... Derrick.
Texas Coast Oil Co.'s No. 1 Clark-Morgan, 330 ft. from S and E lines of Sur. No. 406 ..... Derrick.
Texas Coast Oil Co.'s No. 1 Clark-Morgan Co. ..... Rigging up.
Titus & Calloway's No. 3 Lagasse, 330 ft. from N and W lines of E half of Blk. 25 of Shepherd farm lots.. Derrick.
Titus & Calloway's No. 1 Ran Morgan, 330 ft. from N and E lines of W 80 acres of E 160 acres of N half of 423 acres of B.S.&F. Sur. No. 403 ..... Derrick.
Violet Oil Co.'s No. 1 McGregor-Polk ..... Rigging up.

**WHITE POINT FIELD—SAN PATRICIO COUNTY**

Saxet Oil Co.'s No. 19 Rachel ..... T.D. 4,919 ft; set csg.; W.O.C.

**LOS OLMOS POOL—STARR COUNTY**

Austin et al's No. 1 Kelsey Bass, 150 ft. to N and W lines of NW of NW of Sur. 4, Porcions 75, 76, 77, Jurisdiction of Camargo ..... Rigging up.
Goodwin & Yantis' No. 1 Kelsey Bass, 150 ft. to S and E lines of SE of NW of Sur. 3, Porcions 75, 76, 77.... Rigging up.
Goodwin & Yantis' No. 1 Seabury, 150 ft. from N and E lines of N 80 ac. of Share 5, W portion of Porcion 75, Camargo ..... T.D. 934 ft; set csg.; W.O.C.
J. E. Harper & Co.'s No. 1 E. Salinas, 150 ft. to S and E lines of 40-ac. tract in Share 16, Por. 75 ..... T.D. 308 ft.; standing.
Hooks & Weaver's No. 1 Kelsey Bass, NE SW Sec. 6, Porcions 75, 76, 77, Camargo ..... Moving in rig.
Keck & Keane's No. 2 Kelsey Bass, 150 ft. from N and W lines of NE NE Sec. 6 of Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 1,040 ft; drlg.
Los Olmos Oil & Gas Co.'s No. 42 Kelsey Bass, 450 ft. from E line, 420 ft. from N line of SE of NW Sec. 7, Porcions 75, 76, 77, Camargo ..... T.D. 210 ft.; drlg.

(Continued on Page 121)

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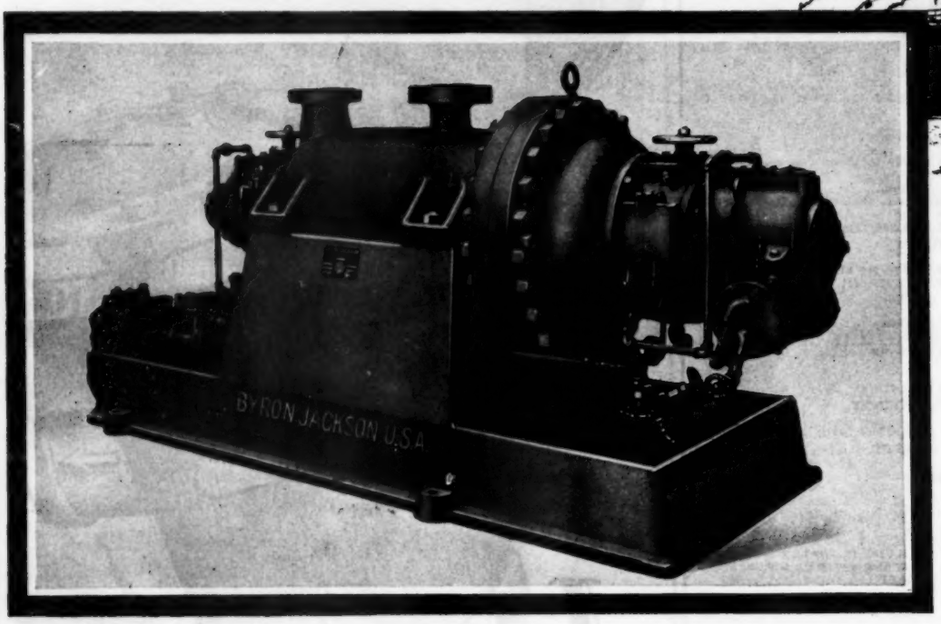


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# BYRON JACKSON PUMPS

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# Completed Wells in 1932 Surpassed 1931 Record With New Oil Wells Greatly on Increase

By JAMES McINTYRE

In the face of low crude oil prices and the ever present threat of a vast overproduction, drilling operations in 1932 were carried on with surprising vigor and the report for the year from all fields in the United States compared to the 1931 record shows an increase of 2,589 in wells completed and of 3,656 in oil wells. East Texas was responsible for the most of this net gain as 5,636 new oil wells were recorded in 1932 as against 3,279 in 1931. In the matter of oil wells completed a number of divisions last year surpassed their record of the year before. The old Eastern Fields showed a gain of 356 oil wells, Lima 15, Indiana 19, Kentucky 100, Michigan 64, Kansas 134, Oklahoma 145, North Texas 192, Texas Panhandle 17, Gulf Coast 122, Southwest Texas 187, North Louisiana 60, Montana 17 and New Mexico 18. Just what prompted this increase in drilling over such a wide area of country can only be guessed. It clearly demonstrated the optimism of oil men—their faith in the stability of the production end of the oil industry.

A significant fact in connection with the new oil wells was that in most cases the average initial production per well was smaller than in 1931. In Oklahoma, for example, the average initial production of the 1932 crop of oil wells was 1,006.7 bbls. while in 1931 it was 3,899.2 bbls. In Kansas the 1932 average was 532.6 bbls., as against 632.8 bbls. the previous year. In Michigan, where a major field was developed in the Mount Pleasant area the average was 647.3 bbls. while in 1931 it was 794.8 bbls. West Texas' new oil wells averaged 225.7 bbls. initially as against 317 bbls. in 1931.

It was impossible to accurately state the initial 24-hour production of East Texas wells, because most of them were gauged only a matter of minutes on their first day on production because of the restriction on production per well. Wells in East Texas were not given permission to make a full day production test if doing so would cause them to produce a large volume of oil. In the table on completions only the actual quantity of oil produced on the short time gauges is recorded.

### Oklahoma's New Pools

Ten new pools were opened in Oklahoma last year, two of which are considered of importance, these being the Wentz Community Pool in southwestern Noble County and the West Holdenville Field in Hughes County. The Wentz Pool was opened with an 1,800-bbl. well from Wilcox sand by a group of oil companies which pooled their interests in a block of leases. The first test was drilled under the direction of the L. H. Wentz organization.

The West Holdenville Pool was opened by the Mid-Continent Petroleum Corp. in Section 9-7-8. It started as a gasser but was drilled deeper to the Booch sand and made a 550-bbl. well.

Both the Wentz and the West Holdenville discoveries were followed by development work that has proved they are fields to be reckoned with.

Other Oklahoma pools opened were in Osage, Kay, Lincoln, Pottawatomie, Okmulgee and Jefferson Counties. One hundred and thirty-six new wells were completed in Oklahoma County with only three dry holes, these having been outside the Oklahoma City Field. It was estimated at the beginning of this year that the Oklahoma City Field would see 100 more wells completed, bringing the total to about 1,100 wells and that this will finish the work in that field unless unexpected new leads are found. Strange to say the largest number of new wells completed in the State is credited to Creek County, one of the old oil fields of the State where 219 new wells were brought in last year of which 119 were oil wells, 35 gas wells and 69 dry holes.

In addition to new pools in Oklahoma there were important extensions to pools in Pottawatomie County particularly the West Konawa and the South St. Louis extensions. The development of the Calvin sand which lies above the big pay in the Greater Seminole area and which was passed by in the old days of flush Wilcox sand production was one of the features of the year in that area.

### Kansas Shows New Pools

One major pool was opened in Kansas last year and six other pools were discovered but it will require the future to show their importance, J. E. Mabee, Inc., opened the Mabee Pool in McPherson County with a Hunton lime producer and the Shell Petroleum Corp. opened the Johnson Pool in McPherson County. Two pools were opened in Rice County, two in Ellsworth County and a gas area in Finney County.

The Hollow Pool in Harvey County, which was opened in 1931 in Section 20-22-3w, was developed into an important pool in 1932. Fourteen wells were drilled last year and given a potential production of 14,000 bbls. per day.

An 80,000,000-foot gasser was drilled in Reno County and a 14,300-bbl. oil well was completed in the Ritz-Canton Field in McPherson County, both of which were the largest in their class during the year.

### Conroe Important Discovery

The Gulf Coast division supplied the most important new discovery of 1932, the Conroe Field in Montgomery County, Texas, but it also contributed a dozen other discoveries of more or less significance in Texas and South Louisiana and stamped itself as one of the great prospective areas of the future for exploratory and development work. The Conroe Field is just north of the salt dome area on the Gulf Coast. At the opening of the year one wet gas well was all the field boasted but by the end of December 100 oil wells were scattered around the field. The first oil well was drilled in in June but the discovery may be credited to G. W. Strake's No. 1 South Texas Development Co. which, although it came in as a wet gasser late in 1931, called attention to the field and was later developed into an oil well by deeper drilling. The Humble Oil & Refining Co. bought about half of Strake's big block of leases and thereafter was the leading operator in the field. Later Tide Water Oil Co. bought into the field and The Texas Company, Standard Oil Co. of Kansas, Houston Oil Co., Skelly Oil Co., Gulf Drilling & Production Co., Sun Oil Co., Alpha Oil Co. and Navarro Oil Co. also took part in developing the pool, which was known to be 15,000 acres in extent at the close of the year.

Other entirely new discoveries in the Gulf Coast region occurred in Vermillion and Ascension Parishes, in South Louisiana, and Matagorda, Brazoria, Hardin, Victoria and Refugio Counties in Texas. The United North & South Development Co. opened the deepest producing pool on the Gulf Coast in Matagorda County with an 1,850-bbl. well producing 35 gravity crude from sand at a depth of 7,808-7,924 feet.

### East Texas Busiest Year

The sensational East Texas Field, which was opened in the fall of 1930 in

(Continued on Page 73)

**SUMMARY OF COMPLETED WELLS IN ALL THE FIELDS OF THE UNITED STATES IN 1932 AND 1931**

| | | Comp. | Init. prod. (bbls.) | Dry holes | Gas wells | Oil wells | Av. init. prod. (bbls.) |
|---|---|---|---|---|---|---|---|
| Eastern | 1932 | 1,560 | 5,906 | 203 | 270 | 1,087 | 5.5 |
| | 1931 | 1,726 | 4,111 | 316 | 679 | 731 | 5.6 |
| Central Ohio | 1932 | 406 | 2,118 | 124 | 185 | 97 | 21.8 |
| | 1931 | 574 | 2,999 | 161 | 295 | 118 | 25.4 |
| Lima | 1932 | 124 | 1,678 | 24 | 51 | 49 | 34.2 |
| | 1931 | 148 | 940 | 24 | 90 | 34 | 27.7 |
| Indiana | 1932 | 190 | 2,516 | 81 | 55 | 54 | 46.6 |
| | 1931 | 162 | 1,492 | 80 | 47 | 35 | 42.6 |
| Kentucky-Tennessee | 1932 | 495 | 16,026 | 158 | 58 | 279 | 57.5 |
| | 1931 | 424 | 12,122 | 125 | 120 | 179 | 67.2 |
| Michigan | 1932 | 174 | 73,120 | 50 | 11 | 113 | 647.3 |
| | 1931 | 127 | 38,947 | 48 | 30 | 49 | 794.8 |
| Mississippi | 1932 | 53 | 500 | 14 | 38 | 1 | 500.0 |
| | 1931 | 76 | ..... | 40 | 36 | .... | ..... |
| Alabama | 1932 | 3 | ..... | 3 | .... | .... | ..... |
| | 1931 | .... | ..... | .... | .... | .... | ..... |
| Missouri | 1932 | .... | ..... | .... | .... | .... | ..... |
| | 1931 | 4 | ..... | 4 | .... | .... | ..... |
| Illinois | 1932 | 47 | 81 | 29 | 6 | 12 | 6.8 |
| | 1931 | 39 | 107 | 25 | 1 | 13 | 8.2 |
| Kansas | 1932 | 572 | 193,139 | 188 | 21 | 363 | 532.6 |
| | 1931 | 470 | 144,921 | 129 | 112 | 229 | 632.8 |
| Oklahoma | 1932 | 1,130 | 647,316 | 381 | 106 | 643 | 1,006.7 |
| | 1931 | 1,058 | 1,941,805 | 374 | 186 | 498 | 3,899.2 |
| North Central Texas | 1932 | 1,214 | 29,661 | 670 | 52 | 492 | 60.3 |
| | 1931 | 1,055 | 31,246 | 677 | 78 | 300 | 104.2 |
| East Central Texas | 1932 | 144 | 8,272 | 75 | 3 | 66 | 125.3 |
| | 1931 | 184 | 244,846 | 93 | 7 | 84 | 2,914.8 |
| East Texas | 1932 | 5,760 | 389,100 | 118 | 6 | 5,636 | 69.0 |
| | 1931 | 3,396 | 2,205,851 | 117 | .... | 3,279 | 672.4 |
| East Texas gas area | 1932 | 41 | 10 | 33 | 7 | 1 | 10.0 |
| | 1931 | 58 | ..... | 52 | 6 | .... | ..... |
| West Texas | 1932 | 223 | 34,298 | 67 | 4 | 152 | 225.7 |
| | 1931 | 321 | 53,884 | 148 | 3 | 170 | 317.0 |
| Texas Panhandle | 1932 | 159 | 48,152 | 22 | 27 | 110 | 437.7 |
| | 1931 | 199 | 33,317 | 29 | 77 | 93 | 358.2 |
| Gulf Coast | 1932 | 881 | 415,458 | 362 | 20 | 499 | 832.6 |
| | 1931 | 731 | 222,544 | 329 | 25 | 377 | 590.3 |
| Southwest Texas | 1932 | 900 | 121,836 | 471 | 49 | 380 | 320.6 |
| | 1931 | 624 | 65,114 | 380 | 51 | 193 | 337.8 |
| North Louisiana | 1932 | 327 | 37,397 | 177 | 38 | 112 | 333.9 |
| | 1931 | 258 | 22,842 | 130 | 76 | 52 | 439.3 |
| Arkansas | 1932 | 50 | 712 | 45 | 1 | 4 | 178.0 |
| | 1931 | 60 | 4,128 | 36 | 5 | 19 | 217.3 |
| Montana | 1932 | 62 | 9,057 | 26 | 6 | 30 | 301.9 |
| | 1931 | 96 | 809 | 47 | 36 | 13 | 62.2 |
| Wyoming | 1932 | 61 | 3,392 | 24 | 6 | 31 | 109.4 |
| | 1931 | 71 | 10,759 | 22 | 9 | 40 | 269.0 |
| Colorado | 1932 | 25 | 117 | 18 | 3 | 4 | 29.2 |
| | 1931 | 27 | 2,766 | 12 | 5 | 10 | 276.6 |
| New Mexico | 1932 | 63 | 171,518 | 15 | 4 | 44 | 3,898.1 |
| | 1931 | 58 | 80,625 | 21 | 11 | 26 | 3,101.0 |
| Utah | 1932 | 1 | 35 | .... | .... | 1 | 35.0 |
| | 1931 | 2 | ..... | 2 | .... | .... | ..... |
| California | 1932 | 356 | 156,823 | 172 | .... | 184 | 852.3 |
| | 1931 | 484 | 364,434 | 238 | .... | 246 | 1,481.4 |
| Total | 1932 | 15,021 | 2,368,238 | 3,550 | 1,027 | 10,444 | *226.8 |
| Total | 1931 | 12,432 | 5,490,609 | 3,659 | 1,985 | 6,788 | 808.8 |
| Difference | | 2,589 | 3,122,171 | 109 | 958 | 3,656 | 672.3 |

*Initial production of wells in East Texas and Van Pool in East Central Texas represent only short time flow ranging from a few minutes to one hour in, most cases, therefore the average initial production per well in 1932 does not have the significance such averages had in past years when based on full 24-hour initial production.

**Record for Past 10 Years**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total | 1932 | 15,021 | 2,368,238 | 3,550 | 1,027 | 10,444 | *226.8 |
| Total | 1931 | 12,432 | 5,490,609 | 3,659 | 1,985 | 6,788 | 808.8 |
| Total | 1930 | 21,240 | 9,955,835 | 6,734 | 2,866 | 11,640 | 855.3 |
| Total | 1929 | 26,356 | 6,170,311 | 7,914 | 2,870 | 15,572 | 396.3 |
| Total | 1928 | 22,331 | 8,365,778 | 7,078 | 2,727 | 12,526 | 667.9 |
| Total | 1927 | 24,143 | 4,918,197 | 7,210 | 2,491 | 14,442 | 340.4 |
| Total | 1926 | 29,319 | 3,683,787 | 7,965 | 2,341 | 19,013 | 193.7 |
| Total | 1925 | 25,623 | 4,300,356 | 6,735 | 2,330 | 16,558 | 260.0 |
| Total | 1924 | 21,894 | 3,255,491 | 4,950 | 2,173 | 14,771 | 221.0 |
| Total | 1923 | 23,438 | 6,105,100 | 5,883 | 2,349 | 16,206 | 371.0 |

# Crude Oil Production in United States in 1932 Falls to 6-Year Low of 785,304,403 Bbls.

By JAMES McINTYRE

The recorded production of crude oil in the United States in 1932 was 785,304,403 bbls., an average daily production of 2,145,640 bbls. How much the unrecorded production amounted to will never be known. It is believed to have run into millions of barrels.

Whatever the quantity was, it was sufficient to upset the crude and refined oil markets and was a very large factor in bringing prices down to the level they reached in the latter days of January, 1933.

It is an acknowledged fact that the known potential production of crude oil in the United States was greater in 1932 than in any previous year, and yet the output of crude oil last year was 60,499,051 bbls. less than in 1931; 116,436,467 bbls. less than in 1930; 218,962,320 bbls. less than in 1929, the peak year; 112,690,862 bbls. less than in 1928, and 118,546,284 bbls. less than in 1927.

Last year's production exceeded that of 1926 and of all preceding years, and could have exceeded that of the peak year, 1929, but to the credit of 99 per cent of the producers it was kept down in an effort to maintain a parity between supply and demand. The efforts of the 1 per cent of operators prevented the success of the stabilization plan, and they were aided and abetted by a small coterie of refiners, the situation being aggravated by tax dodging filling station owners who were able to undersell honest competitors by retaining a part of the state tax paid them by the ultimate consumer. Thus, all along the line from producer to consumer a chiseling process took away the legitimate profits of the industry as a whole.

The situation was not as bad in 1932 as it is in the early days of 1933. With the average Mid-Continent "sweet" crude down to 46 cents per barrel, and with old stripper production yielding from 34 to 40 cents per barrel on the most recent schedule of prices, the crude oil market is down to a condition almost if not quite as bad as it was in the Cushing and Glenn Pool days. The price of Pennsylvania Grade crude oil is lower than at any time in the past 30 years and everywhere east of California the position of the oil prdoucer is deplorable.

The average production of oil wells on production last year was only 6.75 bbls. per day per well. Of the 317,684 wells producing 250,000 are very small wells averaging less than 1 bbl. per day per well. The lifting costs in these quarter million oil wells exceeds the price being paid for crude oil on the present schedules and the producers will have to take this loss until conditions improve, because they have too much at stake to abandon the hidden and unproduced wealth which they hope some day will again become an asset. An abandoned old well is forever abandoned because it would not pay to redrill old leases at whatever price we may hope to see in the future. If kept alive they may some day make up for the hard usage to which they are now being subjected. It was only a few years ago that old production was considered to be "as good as government bonds."

### Most States Produced Less

Most of the states produced less oil last year than in 1931. The following table shows the record of decline from 1931:

| | Decline barrels |
|---|---|
| California | 10,701,238 |
| Oklahoma | 26,216,614 |
| Texas | 14,229,816 |
| Arkansas | 3,096,537 |
| Kansas | 3,617,132 |
| Wyoming | 1,697,524 |
| Louisiana | 388,647 |
| Ohio | 712,000 |
| Kentucky | 168,000 |
| Montana | 527,046 |
| Colorado | 378,798 |
| New Mexico | 3,015,699 |
| Indiana | 25,000 |
| Tennessee | 2,000 |
| West Virginia | 570,000 |
| Total | 65,346,051 |

### A Few Increases

A few states increased their production, and surprisingly they were mostly old producing territories.

| | Increase barrels |
|---|---|
| New York | 1,129,000 |
| Pennsylvania | 533,000 |
| Illinois | 84,000 |
| Michigan | 3,101,000 |
| Total | 4,847,000 |

Only two new fields in the United States produced enough oil last year to put them in the select class of fields producing an average of 10,000 bbls. a day for a year. These were Rabbs Ridge, Texas, which produced a total of 4,223,213 bbls., and the Mount Pleasant Field in Michigan, which produced 6,200,000 bbls. The Conroe Field in Texas has reached the major class but last year produced only 2,499,545 bbls. In December it was producing at the rate of 8,943,595 bbls. per year. Numerous new pools were opened in Kansas, Oklahoma, Arkansas, Texas and other states, but they were not developed to major proportions, or else were small pools. Only 46 pools were in the 10,000-bbl. or better class last year out of a total of 97 pools that have been in one year or another known as major pools between 1925 and 1932, both inclusive. Fifty-one of the ninety-seven pools have fallen below the 10,000-bbl. per day figure.

Outside of East Texas, Oklahoma City and Kettleman Hills there are no fields to fear in the United States. The great Santa Fe Springs Field in California, which produced 76,477,464 bbls. in 1929, was down to 22,538,036 bbls. last year. The Seminole Field, which reached a high of 135,951,098 bbls. from five pools in 1927, is down to 34,928,075 bbls. from 12 pools in 1932 and is definitely on the way to the settled production class. Pecos County, Texas, consisting largely of the Yates Pool, produced 42,603,498 bbls. in 1930, but only 23,654,666 bbls. last year. Winkler County (Hendricks and scattered small pools), which reached a peak of 58,893,863 bbls. in 1929, produced 11,152,545 bbls. last year. Spindletop, which after the discovery of deeper production yielded 21,264,935 bbls. in 1927, was down to 1,442,560 bbls. last year. The Upton-Crane Field in West Texas, which produced 29,583,131 bbls. in 1927 and came back in 1928 with 25,261,260 bbls., produced only 7,375,773 bbls. in 1932. Smackover hit a year's peak of 74,075,613 bbls. in 1925 and declined year after year until in 1932 it produced 9,716,628 bbls.

The fields mentioned are those which have shown the greatest decline in recent years. Many other pools and fields that were prominent at one time or another in the past eight years are all on the way to the stripper class. These include notable pools like Wortham, Powell, Mexia, Refugio, Darst Creek, in Texas; St. Louis, Burbank, Tonkawa, the individual Seminole pools, in Oklahoma; Greenwood County, Kansas; Salt Creek, Wyoming, and scores of older pools in all the oil producing states. California pools have also experienced a serious decline but some of them may reach new peaks by the discovery of deeper production. It is not well to ever discount a California pool.

### Few Fields Increase

A very few fields in the country showed an increase in production last year over their 1931 record. Two of these were among the world's oldest pools, Allegany and Bradford, in southwestern New York and northwestern Pennsylvania. They are credited with a production of 12,682,750 bbls. last year and 11,419,000 bbls. in 1931. Last year was the best record the Bradford-Allegany Field has made since about 1886. The Bradford Field reached its peak of production in 1881 and the Allegany Field in 1882, yet they are today producing more oil than they were in 1887, by means of flooding operations, and are capable of producing more than they were at their peaks a half century ago by simply increasing flooding operations. The combined field is made up of about 105,000 acres of productive structure and notwithstanding the very favorable showing the field is making it is only producing at the rate of about .83 bbl. per day per well, and many wells not yet subjected to intensive flooding are yielding much less than the average given. The possibilities of future flooding may easily be seen.

### Western Fields Responsible

But discussing the old Bradford and Allegany Field is merely to show what one phase of modern operating can accomplish. The production of that field has a powerful influence on the market for Pennsylvania Grade oil but has nothing to do with the markets for other oils which are affected by the tremendous potentials of Mid-Continent, Gulf Coastal and California fields. It is to Oklahoma City, East Texas and Kettleman Hills that we turn to note changes in production between 1931 and 1932. Kettleman Hills increased 5,414,777 bbls. last year. East Texas increased 14,216,487 bbls., but the Joiner Pool fell off 800,974 bbls. and Kilgore 4,451,199 bbls. It was the Longview end of the East Texas Field that was responsible for the net gain. Longview increased its production 19,468,660 bbls. Oklahoma City fell off 11,424,971 bbls. not because of any natural decline but because crude oil buyers preferred to purchase East Texas oil because of the field's more favorable geographical position.

Much has been written and said about

PRODUCTION IN THE UNITED STATES, 1925 TO 1932 INCLUSIVE

| | 1925 (bbls.) | 1926 (bbls.) | 1927 (bbls.) | 1928 (bbls.) | 1929 (bbls.) | 1930 (bbls.) | 1931 (bbls.) | 1932 (bbls.) | No. active wells Dec. 31, 1932 | Daily av. prod. per well (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|
| California | 230,147,342 | 224,117,013 | 230,751,463 | 231,982,597 | 292,036,911 | 228,091,899 | 188,829,032 | 178,127,794 | 8,928 | 54.51 |
| Oklahoma | 173,270,063 | 177,651,198 | 276,022,024 | 247,500,851 | 252,229,474 | 216,114,591 | 175,703,848 | 149,487,234 | 58,474 | 6.98 |
| Texas | 144,783,451 | 172,545,278 | 220,030,512 | 255,354,357 | 298,713,694 | 292,392,102 | 328,608,575 | 314,378,759 | 40,749 | 21.08 |
| Arkansas | 78,407,138 | 58,729,606 | 40,411,375 | 32,137,934 | 25,443,570 | 20,114,782 | 15,626,407 | 12,529,870 | 2,914 | 11.75 |
| Kansas | 38,151,622 | 41,346,511 | 41,943,577 | 38,150,878 | 40,658,170 | 42,123,347 | 38,956,338 | 35,339,206 | 18,526 | 5.21 |
| Wyoming | 29,229,303 | 25,465,553 | 20,983,675 | 21,403,460 | 19,071,618 | 17,740,017 | 14,692,272 | 12,994,748 | 3,523 | 10.08 |
| Louisiana | 21,537,564 | 24,283,144 | 24,330,954 | 22,862,564 | 21,137,263 | 23,881,270 | 22,856,536 | 22,467,889 | 2,996 | 20.49 |
| Illinois | 7,862,000 | 7,770,500 | 6,873,000 | 6,475,000 | 6,356,500 | 5,651,000 | 4,717,000 | 4,801,000 | 14,900 | .88 |
| Pennsylvania | 7,831,200 | 8,971,200 | 9,642,000 | 9,914,000 | 11,804,800 | 12,918,000 | 11,862,000 | 12,395,000 | 79,871 | .42 |
| Ohio | 7,175,000 | 7,307,500 | 7,542,500 | 7,105,500 | 6,730,200 | 6,483,000 | 5,318,000 | 4,606,000 | 36,850 | .34 |
| Kentucky | 6,770,000 | 6,297,200 | 6,590,000 | 7,350,000 | 7,821,400 | 7,462,000 | 6,490,000 | 6,322,000 | 15,300 | 1.13 |
| West Virginia | 5,780,000 | 5,962,400 | 6,033,000 | 5,746,000 | 5,608,600 | 5,111,000 | 4,477,000 | 3,907,000 | 14,900 | .74 |
| Montana | 4,122,653 | 7,744,605 | 5,171,883 | 3,998,549 | 3,827,067 | 3,203,808 | 2,847,201 | 2,320,155 | 1,433 | 4.42 |
| New York | 1,660,000 | 1,934,200 | 2,237,000 | 2,579,000 | 3,345,600 | 3,854,000 | 3,395,000 | 4,524,000 | 14,500 | .85 |
| Colorado | 1,171,625 | 2,776,442 | 2,722,670 | 2,744,184 | 2,361,595 | 1,623,639 | 1,492,862 | 1,114,064 | 252 | 12.08 |
| New Mexico | 1,096,617 | 1,695,645 | 1,214,254 | 973,891 | 1,803,261 | 10,377,415 | 15,360,383 | 12,344,684 | 463 | 72.85 |
| Indiana | 828,000 | 785,200 | 852,500 | 1,054,000 | 905,800 | 990,000 | 831,000 | 806,000 | 2,490 | .88 |
| Tennessee | 23,000 | 44,200 | 62,200 | 50,000 | 20,000 | 20,000 | 7,000 | 5,000 | ..... | ..... |
| Michigan | ..... | 103,000 | 436,100 | 613,000 | 4,391,200 | 3,589,000 | 3,733,000 | 6,834,000 | 615 | 30.36 |
| Miscellaneous | ..... | 30,780 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Total | 759,846,578 | 775,561,175 | 903,850,687 | 897,995,265 | 1,004,266,723 | 901,740,870 | 845,803,454 | 785,304,403 | 317,684 | 6.75 |

the ultimate production of the East Texas Field. There are more well posted oil men who estimate the field will produce at least 1,000,000,000 bbls. than there are estimating it at a lower figure. No American oil field has ever made 1,000,000,000 bbls. and no field unless it is East Texas will ever reach that figure. East Texas has a long way to go to reach that goal. The Midway-Sunset Field in California, opened in 1901, has produced 729,659,496 bbls. up to the first of this year. It leads all American oil fields in crude oil production. The oil averages 23 gravity. Next to it

(Continued on Page 67)

## Variation in Annual Crude Oil Production of the Major Fields of the United States From 1925 to 1932, Both Inclusive

(In Barrels of 42 Gallons)

| Pool— | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 |
|---|---|---|---|---|---|---|---|---|
| Santa Fe Springs, California | 18,969,528 | 17,446,709 | 15,153,578 | 16,093,931 | 76,477,464 | 44,251,396 | 24,272,660 | 22,538,036 |
| Elwood-Goleta, California | ..... | ..... | 86,840 | 895,152 | 9,435,819 | 14,606,307 | 10,470,059 | 5,441,626 |
| Ventura Avenue, California | 6,699,403 | 14,795,495 | 17,808,704 | 18,920,942 | 20,934,388 | 17,493,155 | 16,255,256 | 12,332,853 |
| Seal Beach, California | ..... | 587,107 | 16,424,929 | 12,436,371 | 14,418,305 | 8,026,796 | 4,882,115 | 4,522,489 |
| Kern River, California | 5,901,855 | 4,358,396 | 6,098,582 | 5,071,284 | 6,089,344 | 5,349,915 | 3,857,474 | 3,387,262 |
| Midway-Sunset, California | 36,923,402 | 33,968,755 | 31,670,708 | 27,314,093 | 25,310,976 | 23,487,147 | 18,728,461 | 17,929,036 |
| Elk Hills, California | 11,971,149 | 12,292,754 | 10,073,073 | 8,107,198 | 6,353,035 | 6,572,379 | 4,925,636 | 4,537,461 |
| Coalinga, California | 7,751,107 | 7,295,807 | 7,154,599 | 4,655,284 | 3,558,843 | 3,373,078 | 2,978,392 | 3,649,578 |
| Fullerton, California | 4,481,443 | 6,987,489 | 7,008,934 | 5,743,044 | 4,813,942 | 4,423,266 | 3,626,008 | 3,018,125 |
| Coyote, California | 7,140,004 | 6,030,619 | 5,146,864 | 4,901,988 | 4,176,035 | 3,890,047 | 3,751,857 | 3,716,467 |
| Montebello, California | 6,843,194 | 6,515,493 | 5,498,252 | 4,369,638 | 3,657,922 | 2,712,725 | 2,446,052 | 2,162,530 |
| Richfield, California | 4,318,488 | 5,574,244 | 7,884,042 | 6,798,673 | 5,776,258 | 3,643,578 | 2,443,186 | 2,263,699 |
| Huntington Beach, California | 15,887,474 | 19,064,814 | 26,344,697 | 19,642,278 | 16,007,030 | 11,108,203 | 7,778,549 | 8,016,801 |
| Long Beach, California | 40,173,375 | 37,931,964 | 34,541,667 | 62,467,103 | 60,495,555 | 36,599,688 | 30,166,409 | 27,435,553 |
| Torrance, California | 13,242,817 | 10,354,905 | 8,338,938 | 6,454,067 | 5,000,218 | 4,116,846 | 2,191,781 | 2,281,274 |
| Inglewood, California | 18,348,396 | 17,390,131 | 12,571,556 | 10,762,797 | 8,768,101 | 6,429,205 | 5,289,125 | 4,869,335 |
| Dominguez, California | 13,328,817 | 7,801,586 | 5,887,645 | 4,267,009 | 3,606,850 | 3,694,075 | 4,183,052 | 6,823,579 |
| Playa Del Rey, California | ..... | ..... | ..... | ..... | 25,121 | 4,719,981 | 9,759,018 | 5,910,926 |
| Kettleman Hills, California | ..... | ..... | ..... | 199,699 | 1,951,786 | 6,209,357 | 16,544,824 | 21,959,601 |
| Mount Poso, California | ..... | ..... | 40,277 | 53,977 | 1,826,056 | 3,883,924 | 3,009,374 | 2,907,839 |
| Rosecrans, California | 7,263,466 | 6,114,430 | 3,506,116 | 2,392,325 | 2,463,808 | 2,435,341 | 1,334,452 | 1,125,624 |
| Joiner, Texas | ..... | ..... | ..... | ..... | ..... | 29,122 | 37,932,810 | 37,131,836 |
| Kilgore, Texas | ..... | ..... | ..... | ..... | ..... | ..... | 43,537,815 | 39,086,616 |
| Longview, Texas | ..... | ..... | ..... | ..... | ..... | ..... | 26,257,287 | 45,725,947 |
| Pecos County, Texas | ..... | ..... | 5,250,173 | 22,673,875 | 41,733,955 | 42,603,498 | 27,401,174 | 23,654,666 |
| Joe Bruner, Texas | ..... | ..... | ..... | 178,430 | 13,556,048 | 7,387,359 | 4,350,149 | 2,979,078 |
| Pampa, Texas | ..... | ..... | 3,966,412 | 7,795,865 | 18,406,284 | 21,782,549 | 14,861,340 | 11,244,964 |
| Chalk-Settles, Texas | ..... | 100,915 | 1,127,269 | 4,692,236 | 14,826,190 | 11,188,886 | 9,762,304 | 6,668,057 |
| Barbers Hill, Texas | 38,338 | 192,971 | 307,160 | 306,177 | 4,523,350 | 7,865,597 | 8,085,278 | 7,383,572 |
| Dewalt, Texas | ..... | ..... | ..... | 391,244 | 4,016,401 | 4,291,689 | 4,198,004 | 3,424,869 |
| Wilbarger County, Texas | 3,314,523 | 5,116,448 | 4,462,768 | 8,124,626 | 10,411,183 | 7,867,089 | 4,167,464 | 3,361,161 |
| Humble, Texas | 1,729,740 | 1,679,449 | 1,523,844 | 1,263,983 | 2,996,409 | 5,864,035 | 3,041,585 | 2,238,043 |
| Pierce Junction, Texas | 327,815 | 1,041,723 | 3,163,585 | 3,983,484 | 5,193,061 | 4,056,270 | 2,960,390 | 1,837,673 |
| Mirando, Texas | 1,069,980 | 4,227,957 | 4,540,520 | 3,098,196 | 4,165,620 | 4,097,075 | 5,063,071 | 6,340,301 |
| Shackelford County, Texas | 1,049,283 | 2,712,610 | 3,038,704 | 3,639,368 | 4,145,166 | 2,319,132 | 1,203,841 | 1,445,565 |
| Burkburnett, Texas | 5,158,665 | 4,330,121 | 4,592,203 | 4,031,011 | 3,597,936 | 3,104,834 | 2,460,663 | 2,005,286 |
| Electra, Texas | 6,294,646 | 6,127,336 | 5,099,618 | 4,627,192 | 4,601,996 | 3,995,470 | 2,941,619 | 2,988,143 |
| Archer County, Texas | 13,254,247 | 11,875,426 | 9,648,832 | 7,374,445 | 6,592,594 | 6,023,760 | 4,384,656 | 4,057,536 |
| Hutchinson County, Texas | 382,340 | 23,101,806 | 32,240,493 | 13,839,632 | 9,709,746 | 7,285,486 | 3,933,837 | 4,496,338 |
| Brown County, Texas | 1,349,932 | 3,596,033 | 7,519,647 | 4,257,149 | 3,147,236 | 2,291,227 | 1,204,495 | 963,828 |
| Big Lake, Texas | 8,759,457 | 10,978,135 | 8,668,381 | 7,039,043 | 6,425,664 | 7,016,204 | 9,501,820 | 9,068,844 |
| Hendricks, Texas | ..... | 6,431 | 3,109,523 | 58,893,863 | 49,826,190 | 25,925,581 | 14,992,723 | 11,152,545 |
| Luling, Texas | 9,371,992 | 7,809,771 | 6,099,264 | 5,097,808 | 4,246,861 | 3,476,058 | 2,948,514 | 2,653,814 |
| Hull, Texas | 7,296,687 | 7,242,551 | 5,914,333 | 4,115,269 | 3,488,869 | 3,161,436 | 2,237,018 | 1,855,169 |
| West Columbia, Texas | 4,183,636 | 3,366,892 | 3,459,220 | 2,928,949 | 2,441,432 | 1,915,990 | 1,490,108 | 1,329,437 |
| Wortham, Texas | 16,024,035 | 2,834,207 | 1,137,396 | 664,582 | 430,552 | 276,468 | 148,646 | 49,787 |
| South Liberty, Texas | 4,674,003 | 2,089,391 | 1,102,830 | 1,404,499 | 2,207,257 | 1,550,477 | 694,626 | 389,575 |
| Spindletop, Texas | 420,893 | 14,838,218 | 21,264,935 | 14,332,357 | 10,183,684 | 5,997,913 | 3,209,994 | 1,442,560 |
| Powell, Texas | 17,218,874 | 10,379,485 | 6,249,034 | 4,059,389 | 2,884,177 | 2,077,524 | 1,362,278 | 956,071 |
| Young County, Texas | ..... | 2,900,081 | 3,473,329 | 2,987,054 | 2,481,445 | 5,229,401 | 4,231,600 | 3,391,514 |
| Van, Texas | ..... | ..... | ..... | ..... | 122,139 | 7,530,222 | 15,542,023 | 17,361,174 |
| Refugio, Texas | ..... | ..... | ..... | 25,312 | 2,063,475 | 11,698,202 | 9,291,937 | 3,521,832 |
| Darst Creek, Texas | ..... | ..... | ..... | ..... | 228,876 | 11,343,682 | 7,963,694 | 6,080,127 |
| Rabbs Ridge, Texas | ..... | ..... | ..... | ..... | ..... | ..... | 731,624 | 4,223,213 |
| Upton-Crane, Texas | ..... | 2,218,242 | 29,583,131 | 25,261,260 | 17,195,992 | 14,152,389 | 7,102,015 | 7,375,773 |
| Mexia, Texas | 6,730,323 | 4,826,454 | 4,127,388 | 2,552,468 | 1,939,317 | 1,510,993 | 1,186,770 | 967,165 |
| St. Louis-Pearson-Maud, Okla. | 10,400 | 10,677 | 1,406,020 | 21,878,954 | 36,718,245 | 13,194,525 | 8,056,449 | 7,368,077 |
| Oklahoma City, Oklahoma | ..... | ..... | ..... | 110,496 | 8,709,727 | 34,603,067 | 44,822,508 | 33,397,537 |
| Little River, Oklahoma | ..... | ..... | 5,144,014 | 24,447,158 | 28,909,393 | 17,348,145 | 9,444,872 | 6,391,202 |
| Marshall-Lovell, Oklahoma | ..... | ..... | 436,213 | 2,692,520 | 5,759,444 | 2,196,202 | 1,256,441 | 926,897 |
| Allen, Oklahoma | 93,124 | 174,049 | 593,420 | 6,958,689 | 8,971,530 | 6,579,898 | 3,839,577 | 3,255,495 |
| Carr City, Oklahoma | ..... | ..... | ..... | ..... | 3,309,094 | 3,280,091 | 4,262,219 | 4,251,966 |
| Seminole City, Oklahoma | ..... | 10,838,823 | 47,039,644 | 18,237,004 | 11,291,330 | 6,562,504 | 4,370,314 | 3,959,604 |
| Earlsboro, Oklahoma | ..... | 388,469 | 36,885,196 | 33,321,824 | 25,602,005 | 23,398,033 | 12,699,233 | 10,689,164 |
| Bowlegs, Oklahoma | ..... | ..... | 36,649,733 | 23,800,896 | 12,122,250 | 6,509,450 | 4,391,549 | 4,200,043 |
| Searight, Oklahoma | ..... | ..... | 10,232,511 | 5,218,241 | 3,867,349 | 3,107,065 | 1,501,928 | 1,238,664 |
| Sholem-Alechem, Oklahoma | 634,331 | 2,011,408 | 5,255,516 | 5,328,386 | 4,829,057 | 4,852,825 | 4,579,669 | 4,330,587 |
| Burbank, Oklahoma | 19,954,667 | 16,352,805 | 15,266,099 | 13,060,449 | 7,435,589 | 5,717,088 | 4,566,290 | 3,974,096 |
| Tonkawa, Oklahoma | 22,721,580 | 13,867,121 | 7,747,121 | 4,878,203 | 3,518,176 | 2,432,084 | 1,991,634 | 1,836,751 |
| Bristow, Oklahoma | 9,547,666 | 9,080,207 | 7,585,670 | 5,624,601 | 5,295,920 | 4,678,137 | 3,661,296 | 3,095,326 |
| Cushing-Shamrock, Oklahoma | 8,024,551 | 7,621,495 | 6,942,017 | 6,521,413 | 5,988,122 | 4,980,031 | 4,656,393 | 4,349,054 |
| Cromwell, Oklahoma | 11,673,369 | 6,193,396 | 4,521,063 | 3,386,553 | 2,867,933 | 2,604,682 | 1,897,207 | 1,827,744 |
| Healdton, Oklahoma | 5,575,981 | 5,501,310 | 5,447,776 | 5,068,978 | 4,599,309 | 4,208,631 | 4,025,058 | 3,880,981 |
| Konawa, Oklahoma | ..... | ..... | ..... | ..... | ..... | 5,099,516 | 3,118,045 | 1,713,652 |
| Garber, Oklahoma | 7,484,428 | 11,207,851 | 5,292,726 | 2,943,248 | 1,973,902 | 1,639,045 | 1,293,054 | 1,066,194 |
| Wewoka, Oklahoma | 4,483,843 | 9,573,687 | 5,899,957 | 2,415,180 | 2,409,118 | 1,428,714 | 2,844,277 | 1,977,067 |
| Braman, Oklahoma | 2,933,564 | 5,578,860 | 3,858,073 | 1,611,121 | 1,356,608 | 1,115,281 | 713,624 | 620,637 |
| Davenport, Oklahoma | 3,131,158 | 4,309,769 | 1,224,921 | 764,121 | 628,859 | 443,493 | 333,112 | 298,112 |
| Hewitt, Oklahoma | 5,324,672 | 4,200,975 | 3,539,005 | 3,338,421 | 2,952,560 | 2,501,412 | 2,145,897 | 2,045,081 |
| Graham-Fox, Oklahoma | 4,442,526 | 4,114,264 | 3,307,351 | 2,563,882 | 1,991,753 | 1,625,203 | 1,464,595 | 1,328,227 |
| Papoose, Oklahoma | 7,802,531 | 3,632,801 | 2,467,950 | 1,546,151 | 1,204,529 | 982,387 | 714,683 | 642,095 |
| Sedgwick County, Kansas | ..... | ..... | ..... | 378,851 | 8,899,688 | 7,719,802 | 5,840,234 | 4,538,283 |
| Rainbow Bend, Kansas | 3,949,396 | 1,405,225 | 802,672 | 471,840 | 439,251 | 581,240 | 518,281 | 465,490 |
| Eldorado-Augusta, Kansas | 8,867,807 | 9,634,084 | 10,517,922 | 9,690,889 | 9,272,141 | 9,099,075 | 7,769,394 | 6,684,285 |
| Greenwood County, Kansas | 13,464,805 | 17,074,977 | 12,664,125 | 9,872,560 | 7,920,990 | 7,265,892 | 5,564,320 | 4,863,996 |
| Sumner County, Kansas | 3,436 | 1,248,088 | 6,708,275 | 7,787,738 | 4,566,556 | 3,224,852 | 2,348,371 | 1,622,813 |
| McPherson County, Kansas | ..... | ..... | ..... | ..... | ..... | 5,604,670 | 9,184,393 | 7,748,212 |
| Homer, Louisiana | 4,815,883 | 2,071,498 | 1,813,900 | 1,576,940 | 1,418,424 | 1,268,578 | 1,110,815 | 1,047,672 |
| Caddo, Louisiana | 4,178,839 | 4,620,130 | 6,047,857 | 4,888,365 | 4,652,047 | 4,379,614 | 3,345,157 | 2,617,094 |
| Haynesville, Louisiana | 4,815,883 | 3,579,359 | 2,754,300 | 2,222,804 | 1,802,721 | 1,746,089 | 1,908,244 | 1,579,798 |
| Urania, Louisiana | 9,610 | 4,130,917 | 3,621,650 | 2,656,050 | 2,120,465 | 1,905,492 | 1,478,549 | 1,267,008 |
| Smackover, Arkansas | 74,075,613 | 52,155,308 | 35,507,476 | 24,775,769 | 19,666,126 | 18,755,335 | 12,044,935 | 9,716,628 |
| El Dorado-Champagnolle, Arkansas | 3,220,435 | 2,712,610 | 2,188,033 | 5,617,219 | 4,485,371 | 2,986,026 | 2,276,413 | 1,765,143 |
| Salt Creek, Wyoming | 21,680,070 | 18,016,104 | 14,397,590 | 14,066,816 | 11,365,322 | 10,517,980 | 8,846,658 | 7,918,399 |
| Lea County, New Mexico | ..... | ..... | ..... | 34,934 | 740,165 | 9,459,319 | 14,596,714 | 11,768,252 |
| Sunburst, Montana | 2,895,910 | 6,656,280 | 4,313,388 | 3,209,574 | 2,323,406 | 1,940,515 | 1,519,935 | 1,194,786 |
| Bradford-Allegany, Pennsylvania-New York | 5,812,625 | 6,206,000 | 7,314,500 | 8,418,000 | 11,274,000 | 12,249,065 | 11,419,000 | 12,682,124 |

# 1932 Average Prices on Many Refined Products Show Increases From Low Levels of 1931

By C. O. WILLSON

The year 1932 was a period in which average prices on most refinery products advanced from the levels established in 1931 which were the lowest since petroleum became one of the major industries.

The recoveries based on averages for the year were not large in any of the products and in most cases they were still substantially under those of 1930 which in turn were much below the averages for the five-year period ending in 1931. However, many were encouraged by the slightly better prices of 1932 and were hopeful as the year ended that 1933 would see continued improvement in yearly averages for principal refinery products. It should be clearly understood that in this review the discussion is confined to the prices received by refiners, f.o.b. plants, and does not refer to consumer quotations which in some cases were lower in 1932 than in 1931 due to the reductions in margins allowed for marketing.

So far as the profit side of refinery operations was concerned it is certain that 1932 was as unsatisfactory as 1931 when a majority of the large and small operators showed losses in the year's operation. While the refinery revenue was greater in most cases in 1932, this favorable development was offset by increased costs for raw material. As shown in the accompanying table the average price for 36 gravity crude oil at the wells in the Mid-Continent as paid by the larger buyers was 88 cents which was a 25-cent per barrel increase when compared with the 63-cent per barrel average in 1931. Crude oil prices also were slightly higher in Pennsylvania, California and practically all other fields in the United States.

In the Mid-Continent the higher prices for crude oil were part of a program to prevent over supplies of crude through state proration of production. Allowable production was materially curtailed not only in the flush fields but also many of the older producing areas and as a reward for this action on the part of producers, crude oil buyers posted higher prices per barrel for the small volume starting in the spring of 1932. It was hoped that the refiners would be able to reflect their higher costs for raw material in the prices received for their finished products and as previously explained for the industry as a whole, prices did show some recovery from the previous year. However, the average refiner did not consider the increased revenue sufficient to offset the additional costs and it is noteworthy that as the year was brought to a close the crude oil prices were reduced and the new year started with prospects of additional reductions.

### Gasoline and Naphtha

The market for refinery gasolines and blending naphthas in 1932 was largely a duplication of price trends in the two previous years. Attempts were made during the year to advance tank car prices in line with the crude oil market but the advances in all cases were stopped by offerings of cheap gasoline, some of which was refined from crude oil produced in violation of proration orders. As the year closed prices, after an early summer advance, had declined to the point where they were practically the same as those at the start of the year.

In regard to prices, the low octane U. S. Motor gasoline in Oklahoma brought an average price of 3.92 cents per gallon, based on the low weekly quotations of The Oil and Gas Journal. This was an advance of approximately one-half cent when compared with the 3.45-cent average for 1931 which was an all-time low in yearly averages for motor fuels. This comparison, based on Oklahoma prices, is representative for the entire Mid-Continent and Middle West areas where Oklahoma (Group 3) tank car gasoline prices are considered a barometer of market conditions. The middle octane U. S. Motor grade brought one-fourth to five-eighths cent more than the low octane material. So far as the larger refiners are concerned this middle octane grade covers the bulk of plant production. Nevertheless, the low octane material coming largely from new and old skimming plants in the Mid-Continent was the controlling factor in the open tank car market and prices on the regular and premium grades moved up and down with the fluctuations in the third grade.

In Pennsylvania the U. S. Motor gasoline brought an average price of 5.68 cents in 1932 and 4.9 cents in 1931. The California motor gasoline showed some improvement in 1932 when the average price at Los Angeles for domestic movement was 5.46 cents, which compares with 5.1 cents for 1931. It will be noted in the accompanying table that these 1932 domestic gasoline prices, while higher than in 1931, were still much lower than in 1930 and previous years.

### Export Prices Low

The 1932 developments in regard to export gasoline was not as favorable as in the domestic market, the average prices for some grades being lower than in 1931. This was largely due to competition of foreign refiners, particularly those of Rumania and Russia. To secure a larger share of European and Asiatic business refiners in those countries quoted low prices throughout the year which refiners in this country were compelled to meet in order to obtain a part of the new spot business available.

This export situation as regards prices was not improved when, on July 1, 1932, the Federal excise tax of 2½ cents on imported gasoline became effective. In shifting their refining and marketing operations so as not to be penalized through importations, several of the larger importers who previously had supplied a large part of their foreign requirements from their refineries in this country or through purchases from domestic refineries, started supplying this gasoline from their foreign refineries and thus materially reduced the export movement. This was reflected in a dull export market which also tended to weaken prices.

### Natural Gasolines

The 26-70 grade of natural gasoline in Oklahoma brought an average price of 2.22 cents per gallon last year, fluctuating between a low of 1⅜ cents and a high of 3 cents. How ridiculously low this average price was for the year, is apparent when it is realized that it was only slightly greater than the average price for crude oil at the wells in the Mid-Continent.

A refined product, having superior qualities whether used direct as motor fuel or blended with refinery products, natural gasoline in 1932 nevertheless passed through what manufacturers hope will be its worst year. The unsatisfactory year was the result of decreased buying on the part of refiners, many of whom now produce all the light fractions needed at their refineries through cracking. As the year closed, conditions in the Mid-Continent and East were more favorable, due to a decreasing production and greater outlets, a development of the greater emphasis placed on volatility in motor fuels.

In California where very little natural gasoline is sold on the open market, being absorbed through contracts with large refiners, prices were more favorable than in the Mid-Continent.

### Burning Oils

Kerosene and distillates used as furnace oils and other special fuels showed the most important price recovery among refinery products. This recovery was general but was most spectacular in the Mid-Continent where prices, during the last half of the year, advanced approximately 100 per cent from the year's low.

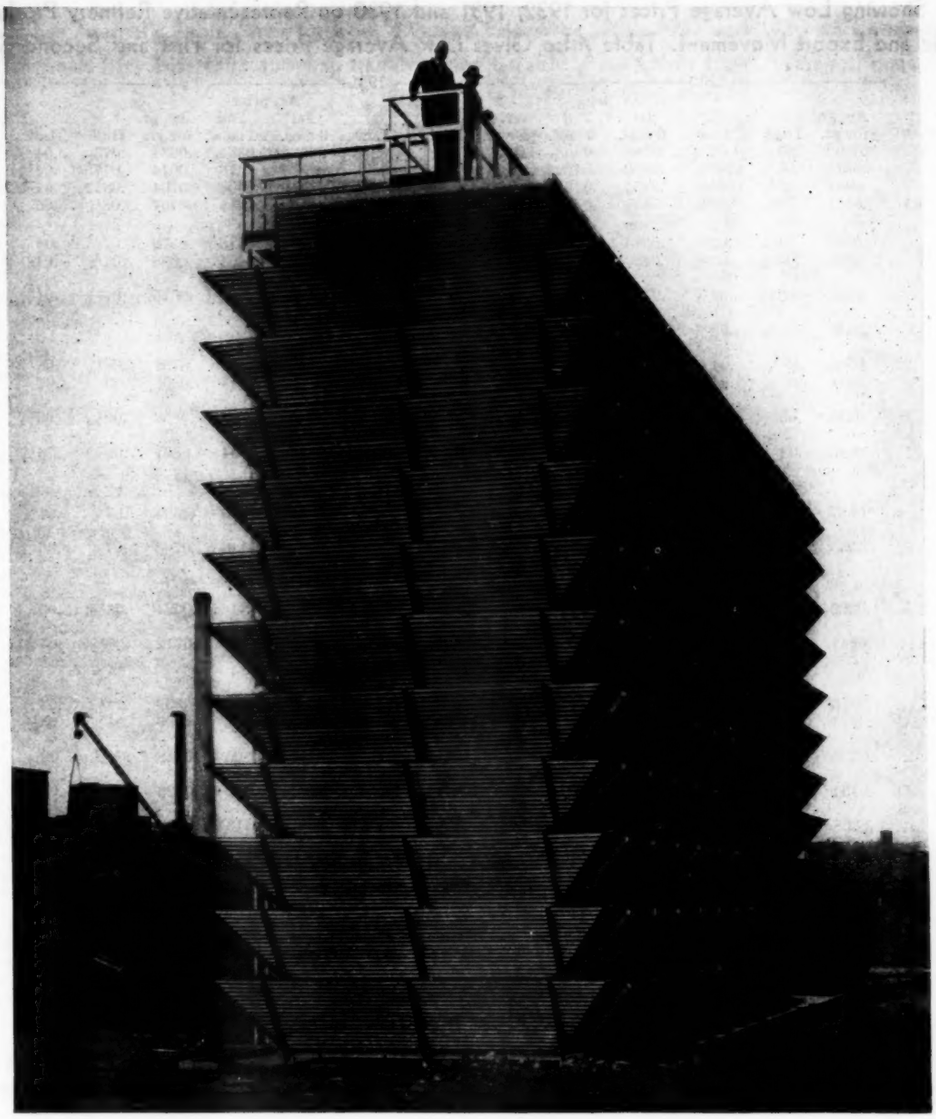
(Continued on Page 67)

## Average Prices on Representative Crude Oils and Refinery Products

| | 1932 | 1931 | 1930 | 1929 | 1928 | 1927 | 1926 | 1925 | 1924 | 1923 |
|---|---|---|---|---|---|---|---|---|---|---|
| **OKLAHOMA—CRUDE OIL** | | | | | | | | | | |
| 36 A.P.I. gravity, per bbl.* | $0.88 | $0.63 | $1.23 | $1.37 | $1.31 | $1.38 | $2.13 | $1.87 | $1.63 | $1.56 |
| **OKLAHOMA—REFINERY PRODUCTS** | | | | | | | | | | |
| 58-60 U. S. Motor gasoline, per gal. | ‡.0392 | .0345 | .0634 | .0775 | .0795 | .0667 | .1031 | .1055 | .0896 | .0978 |
| Natural gasoline, 26-70, per gal. | .0222 | .03 | .0524 | .0683 | .0734 | .0575 | †.0946 | †.1202 | †.0866 | †.0913 |
| 41-43 water white kerosene, per gal. | .0315 | .0231 | .0358 | .0517 | .0517 | .0461 | .0727 | .0445 | .0449 | .04 |
| 24-26 fuel oil, per bbl. | .4548 | .4356 | .7043 | .706 | .7694 | .9792 | 1.3072 | 1.0908 | .954 | .9511 |
| 32-36 gas oil, per gal. (industrial) | .0146 | .0127 | .0227 | .0265 | .0247 | .0299 | .0419 | .0368 | .0291 | .0266 |
| 200 vis., 3 color, 23-28 cold test neutral oil, per gal. | .0834 | .0924 | .1059 | .0966 | .0947 | .1032 | .1072 | .1139 | .1308 | .1317 |
| 124-126 wax, per lb. | .0170 | .0174 | .0216 | .0321 | .0394 | .0294 | .0471 | .0516 | .0446 | .0254 |
| 150-160 D color bright stock | .1837 | .1631 | .2977 | .3368 | .2310 | .... | .... | .... | .... | .... |
| **PENNSYLVANIA—CRUDE OIL** | | | | | | | | | | |
| | 1932 | 1931 | 1930 | 1929 | 1928 | 1927 | 1926 | 1925 | 1924 | 1923 |
| Crude oil in National Transit Lines, per bbl. | $1.88 | $1.81 | $2.55 | $3.69 | $2.98 | $2.87 | $3.51 | $3.50 | $3.60 | $3.33 |
| **PENNSYLVANIA—REFINERY PRODUCTS** | | | | | | | | | | |
| 58-60 U. S. Motor gasoline, per gal. | .0568 | .049 | .0737 | .0905 | .0982 | .09 | .1273 | .1348 | .1224 | .1352 |
| 45 water white kerosene, per gal. | .0451 | .04 | .0501 | .0651 | .0635 | .0646 | .0885 | .0656 | .0671 | .0652 |
| Pennsylvania bright stock, 10-15 pour test, per gal. | .2466 | .2094 | .3373 | .4745 | .3186 | .3326 | .3954 | .3824 | .3655 | .3337 |
| **CALIFORNIA—CRUDE OIL** | | | | | | | | | | |
| | 1932 | 1931 | 1930 | 1929 | 1928 | 1927 | 1926 | 1925 | 1924 | 1923 |
| 25 A.P.I. gravity, Long Beach, per gal. | $0.83 | $0.76 | $1.16 | $1.05 | $0.96 | $1.00 | $1.37 | $1.35 | $1.06 | $0.74 |
| **CALIFORNIA—REFINERY PRODUCTS** | | | | | | | | | | |
| U. S. Motor gasoline, per gal. | .0546 | .0510 | .0806 | .0849 | .0919 | .0873 | .1134 | Average prices on refined products for 1925, 1924 and 1923 on comparable basis not available. | | |
| 75-78, 375-390 e.p., natural gasoline, per gal. | .0447 | .0418 | .0712 | .0803 | .0726 | .093 | .1465 | | | |
| 38-40 kerosene, per gal. | .0398 | .0425 | .0455 | .0569 | .0611 | .07 | .0745 | | | |
| 15-20 fuel oil at tidewater, per bbl. | .5548 | .5836 | .6346 | .6724 | .8892 | .9221 | .9813 | | | |

*Based on posted price for Oklahoma, Kansas and North Texas. 1932 average based on posted prices of Stanolind Crude Oil Purchasing Co. †Grade A. ‡Low octane rating.

Note—Average prices on refined products are based on low quotations as published weekly in The Oil and Gas Journal. Crude prices are daily averages based on posted schedules of major buyers.



# Fireproof Cooling Towers for Oil Plants

Large quantities of cooling water will be required to condense light ends and to obtain high vacua in both steam and oil vapor condensers next summer.

The most economical way of obtaining cool water is by the use of a properly designed cooling tower. Foster Wheeler cooling towers are available in all-metal, fireproof constructions, for use where there is considerable fire hazard, and in redwood or cypress construction for ordinary locations.

Foster Wheeler towers are made in atmospheric, natural draft, forced draft, and induced draft types to fulfill any water cooling requirement. The tower above is an all-metal atmospheric unit in an Eastern refinery.

FOSTER WHEELER CORPORATION, 165 Broadway, New York

FOSTER WHEELER

## The Oil and Gas Journal's Table Showing Low Average Prices for 1932, 1931 and 1930 on Representative Refinery Products (f. o. b. Plants and Terminals) for Domestic and Export Movement. Table Also Gives Low Average Prices for First and Second Six Months.

| | 1932 | | | | | 1931 | | | | | 1930 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Av. price | | | | | Av. price | | | | | Av. price | |
| | Av. pr. | | | 1st | 2nd | Av. pr. | | | 1st | 2nd | Av. pr. | | | 1st | 2nd |
| GASOLINES— | for yr. | High | Low | 6 mos. | 6 mos. | for yr. | High | Low | 6 mos. | 6 mos. | for yr. | High | Low | 6 mos. | 6 mos. |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| *U. S. Motor | .0392 | .05 | .02⅛ | .0381 | .0403 | .0345 | .05 | .02⅛ | .0335 | .0354 | .0634 | .075 | .04 | .0688 | .0584 |
| 60-62 400 | .0411 | .05⅛ | .02⅜ | .0399 | .0422 | .0366 | .05⅛ | .02⅜ | .0357 | .0376 | .0674 | .0775 | .04¼ | .0721 | .0631 |
| 64-66 375 | .0444 | .05⅜ | .02¾ | .0434 | .0454 | .0399 | .05⅜ | .02¾ | .0392 | .0406 | .0704 | .0812 | .04⅝ | .0767 | .0646 |
| 68-70 350 | .0461 | .05½ | .02⅞ | .0451 | .0471 | .0420 | .05½ | .02⅞ | .0422 | .0418 | .0707 | .08½ | .05 | .0771 | .0647 |
| North Texas: | | | | | | | | | | | | | | | |
| *U. S. Motor | .0384 | .04⅞ | .02⅝ | .0374 | .0393 | .0330 | .05 | .02⅛ | .0314 | .0346 | .0572 | .07 | .04 | .0627 | .0521 |
| 64-66 375 | .0436 | .05¼ | .03⅝ | .0429 | .0444 | .0397 | .05⅜ | .02¾ | .0389 | .0404 | .0658 | .07⅝ | .04¾ | .0726 | .0594 |
| †North Louisiana: | | | | | | | | | | | | | | | |
| *U. S. Motor | .0450 | .05½ | .03¼ | .0434 | .0465 | .0389 | .0514 | .02⅝ | .0379 | .0399 | .0675 | .07¾ | .04¾ | .0713 | .0639 |
| †Arkansas: | | | | | | | | | | | | | | | |
| *U. S. Motor | .0448 | .05½ | .03¼ | .0431 | .0466 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pennsylvania: | | | | | | | | | | | | | | | |
| *U. S. Motor | .0568 | .06⅞ | .04 | .0511 | .0626 | .0490 | .06¼ | .04¼ | .0546 | .0434 | .0737 | .08¼ | .06¼ | .078 | .0697 |
| 64-66 375 | .0610 | .07¼ | .04¾ | .0556 | .0664 | .0575 | .07 | .05 | .0608 | .0543 | .0808 | .09 | .07 | .0841 | .0777 |
| California: | | | | | | | | | | | | | | | |
| 54-56 U. S. Motor | .0546 | .06¼ | .04¼ | .0498 | .0593 | .0510 | .08½ | .03 | .0481 | .0538 | .0806 | .09½ | .06½ | .0806 | .0806 |
| New York (Bayonne, N. J.): | | | | | | | | | | | | | | | |
| U. S. Motor, below 65 numbers | .0643 | .08 | .05½ | .0605 | .0682 | .0604 | .07 | .05⅛ | .0644 | .0564 | .0807 | .09 | .06¼ | .0864 | .0755 |
| NAPHTHA— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| 50-52 450 (blending) | .0457 | .04⅞ | .02⅝ | .0503 | .0411 | .0336 | .04½ | .02⅛ | .0336 | .0336 | .0591 | .07 | .04¼ | .0648 | .0538 |
| Pennsylvania: | | | | | | | | | | | | | | | |
| 50-54 430-450 (blending) | .0555 | .06½ | .04 | .0471 | .0618 | .0490 | .06 | .04 | .0535 | .0446 | .0703 | .07¾ | .06 | .0733 | .0675 |
| NATURAL GASOLINES— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| Grade 26-70 | .0222 | .03 | .01⅝ | .0190 | .0254 | .0300 | .05 | .01⅝ | .0241 | .036 | .0524 | .06½ | .03 | .0572 | .0481 |
| California: | | | | | | | | | | | | | | | |
| 75-78 375 | .0447 | .05¼ | .03¾ | .0444 | .045 | .0418 | .05¾ | .01¾ | .0370 | .0466 | .0712 | .08½ | .05¾ | .0753 | .0675 |
| KEROSENES (WATER WHITE)— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| 41-43 | .0315 | .04¼ | .02⅜ | .0317 | .0313 | .0231 | .03 | .01¾ | .0262 | .02 | .0358 | .04⅛ | .03 | .0406 | .0314 |
| 42-44 | .0327 | .04½ | .02½ | .0325 | .0329 | .0249 | .03¼ | .02 | .0281 | .0216 | .0390 | .04⅝ | .03¼ | .044 | .0341 |
| North Texas: | | | | | | | | | | | | | | | |
| 41-43 | .0309 | .04¼ | .02⅜ | .0314 | .0303 | .0215 | .03 | .01¾ | .0255 | .0195 | .0348 | .04⅛ | .03 | .0394 | .0305 |
| Pennsylvania: | | | | | | | | | | | | | | | |
| 45 | .0451 | .05 | .04 | .0442 | .0459 | .0410 | .05¼ | .03½ | .0453 | .0366 | .0526 | .06 | .04¼ | .0568 | .0487 |
| California: | | | | | | | | | | | | | | | |
| 38-40 | .0398 | .04½ | .03¾ | .0392 | .0404 | .0425 | .05 | .03¼ | .0436 | .0413 | .0455 | .05 | .04 | .0446 | .0463 |
| ‡TRACTOR FUELS— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| 39-41 prime white | .0258 | .03⅜ | .02 | .0229 | .0286 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 38-40 light straw | .0242 | .03¼ | .01⅞ | .0207 | .0277 | .0185 | .02¾ | .01¼ | .0220 | .015 | .0294 | .03⅝ | .02¾ | .0313 | .0275 |
| Pennsylvania: | | | | | | | | | | | | | | | |
| 41-43 prime white | .0406 | .04¼ | .03½ | .0398 | .0314 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| §FURNACE OILS— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| 32-36 straw | .0218 | .03⅛ | .01⅝ | .0179 | .0256 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 36-38 straw | .0227 | .03¼ | .01¾ | .0185 | .0270 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 38-40 straw | .0238 | .03⅜ | .01¾ | .0198 | .0277 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| †North Louisiana: | | | | | | | | | | | | | | | |
| 36-40 | .0277 | .04 | .02¼ | .0235 | .0319 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| New York (Bayonne, N. J.): | | | | | | | | | | | | | | | |
| 36-40 | .0472 | .05 | .03¾ | .0453 | .0492 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| GAS OILS— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| 32-36, cracking stock | .0150 | .02⅛ | .01 | .0124 | .0175 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| U. G. I. | .0146 | .02⅛ | .01 | .0122 | .0171 | .0127 | .02 | .00⅝ | .0143 | .0111 | .0227 | .02⅞ | .02 | .0245 | .0211 |
| North Texas: | | | | | | | | | | | | | | | |
| 32-36 industrial | .0136 | .01⅞ | .01⅛ | .0110 | .0162 | .0118 | .02 | .00⅜ | .0137 | .0099 | .0215 | .02⅞ | .02 | .0231 | .0201 |
| California: | | | | | | | | | | | | | | | |
| 30-34, per barrel | .7509 | .85 | .65 | .7692 | .7327 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Gulf Coast: | | | | | | | | | | | | | | | |
| 28-30 | .0296 | .03½ | .02¼ | .0269 | .0323 | .0259 | .03⅛ | .02⅛ | .0292 | .0226 | .0375 | .04 | .03½ | .0381 | .0370 |
| FUEL OILS AND DIESEL OILS— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| Below 16 gravity | .3250 | .45 | .20 | .2596 | .3904 | .2904 | .42½ | .20 | .3510 | .2298 | .5225 | .70 | .40 | .613 | .438 |
| 24-26 | .4548 | .65 | .35 | .3846 | .5250 | .4356 | .65 | .30 | .5240 | .3471 | .7043 | .90 | .55 | .792 | .623 |
| 28-30 | .6397 | 1.00 | .45 | .0487 | .7923 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| North Texas: | | | | | | | | | | | | | | | |
| Below 20 gravity | .3471 | .45 | .25 | .3115 | .3827 | .2663 | .40 | .15 | .2740 | .2587 | .4649 | .65 | .30 | .547 | .39 |
| †North Louisiana: | | | | | | | | | | | | | | | |
| 14-16 | .3553 | .45 | .30 | .3404 | .3702 | .5183 | .70 | .35 | .6135 | .4230 | .0782 | .85 | .70 | .80 | .76 |
| California: | | | | | | | | | | | | | | | |
| 27 plus Diesel | .7432 | .85 | .70 | .7538 | .7327 | .7510 | .80 | .70 | .7462 | .7558 | .8365 | .90 | .75 | .85 | .82 |
| 15-19 bunker (at tidewater) | .5548 | .60 | .50 | .5635 | .5462 | .5836 | .60 | .55 | .5673 | .60 | .6346 | .70 | .55 | .65 | .62 |
| Gulf Coast: | | | | | | | | | | | | | | | |
| Bunker C (bulk cargoes) | .4060 | .55 | .38 | .4358 | .5038 | .5404 | .65 | .40 | .6346 | .4462 | .7130 | .80 | .62½ | .714 | .712 |
| New York (Bayonne, N. J.): | | | | | | | | | | | | | | | |
| Bunker C | .7269 | .85 | .60 | .6615 | .7923 | .8346 | 1.05 | .60 | .9923 | .6769 | 1.0919 | 1.15 | 1.05 | 1.094 | 1.09 |
| 28-30 Diesel oil | 1.5019 | 1.65 | 1.30 | 1.3538 | 1.6500 | 1.5673 | 1.85 | 1.30 | 1.7538 | 1.3808 | 1.9913 | 2.00 | 1.85 | 2.00 | 1.98 |
| NEUTRAL OILS— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| (Zero to 10 cold test) | | | | | | | | | | | | | | | |
| 180, 3 color | .0753 | .08 | .07½ | .0755 | .075 | .0798 | .08½ | .07½ | .0821 | .0764 | .0927 | .10 | .08½ | .986 | .0872 |
| 200, 3 color | .0834 | .08½ | .08¼ | .0843 | .0825 | .0921 | .09¾ | .08½ | .0944 | .0898 | .1059 | .11½ | .09¾ | .111 | .1012 |
| 240, 3 color | .0973 | .10½ | .09¼ | .0971 | .0975 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (15-30 cold test) | | | | | | | | | | | | | | | |
| 200, 3 color | .0778 | .08¾ | .07½ | .0785 | .0770 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pennsylvania: | | | | | | | | | | | | | | | |
| (Viscosity at 70° F.) | | | | | | | | | | | | | | | |
| 200, 3 color, 10 pour test | .1956 | .21 | .17 | .1992 | .1921 | .2031 | .22½ | .17¼ | .2007 | .2056 | .2111 | .25½ | .16½ | .246 | .1787 |

(Continued on Next Page)

## The Oil and Gas Journal's Table Showing Low Average Prices for 1932, 1931 and 1930 on Representative Refinery Products (f. o. b. Plants and Terminals) for Domestic and Export Movement. Table Also Gives Low Average Prices for First and Second Six Months.

(Continued from Preceding Page)

| | 1932 | | | | | 1931 | | | | | 1930 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Av. price | | | | | Av. price | | | | | Av. price | |
| | Av. pr. for yr. | High | Low | 1st 6 mos. | 2nd 6 mos. | Av. pr. for yr. | High | Low | 1st 6 mos. | 2nd 6 mos. | Av. pr. for yr. | High | Low | 1st 6 mos. | 2nd 6 mos. |
| Gulf Coast: | | | | | | | | | | | | | | | |
| 200, 3 pale oil | .0643 | .07 | .06 | .0658 | .0627 | .0775 | .08¼ | .07 | .0807 | .0743 | .0912 | .09½ | .08¼ | .0922 | .0901 |
| 200, 5-6 red oil | .0506 | .06 | .05 | .0531 | .05 | .0699 | .07½ | .06 | .0731 | .0666 | .0829 | .08¾ | .07 | .0831 | .0828 |
| California: | | | | | | | | | | | | | | | |
| 200, 2½-3 pale | .0820 | .10 | .07¾ | .0822 | .0818 | .0950 | .10 | .09 | .0988 | .0912 | .1074 | .11½ | .10 | .11 | .1050 |
| 200, 4½-5 red | .0785 | .09¾ | .07 | .0812 | .0759 | .0956 | .09¾ | .04½ | .0950 | .0962 | .1063 | .11 | .09½ | .11 | .1028 |
| BRIGHT AND STEAM REFINED STOCKS— | | | | | | | | | | | | | | | |
| Oklahoma (Group 3): | | | | | | | | | | | | | | | |
| 150-160, zero to 10 | .1837 | .22 | .15½ | .1854 | .1819 | .1631 | .19½ | .12½ | .1568 | .1692 | .2977 | .37 | .18 | .366 | .23 |
| 600 light green S.R. | .0462 | .05 | .04 | .0444 | .05 | .0486 | .07 | .04 | .0550 | .0420 | .0831 | .10 | .07 | .09 | .0767 |
| Pennsylvania: | | | | | | | | | | | | | | | |
| 600 S.R. | .1236 | .14 | .09½ | .1270 | .1202 | .1014 | .14¼ | .07½ | .0825 | .1203 | .1591 | .24 | .09 | .218 | .1045 |
| Bright Stock, 10-15 pour test | .2466 | .28 | .19 | .2444 | .2488 | .2094 | .29 | .16¼ | .1784 | .2405 | .3073 | .43 | .19 | .39 | .23 |
| WAX— | | | | | | | | | | | | | | | |
| Oklahoma: | | | | | | | | | | | | | | | |
| 124-126 | .0170 | .01⅞ | .01⅝ | .0169 | .1707 | .0174 | .02 | .01½ | .0185 | .0162 | .0216 | .02¾ | .01¾ | .0234 | .0199 |
| New York (Bayonne, N. J.): | | | | | | | | | | | | | | | |
| 120-122 | .0263 | .02⅞ | .02⅜ | .0281 | .2452 | .0293 | .03 | .02¾ | .0297 | .0288 | .0326 | .03⅞ | .02¾ | .0358 | .0296 |
| EXPORT PRICES | | | | | | | | | | | | | | | |
| GASOLINE— | | | | | | | | | | | | | | | |
| Gulf Coast: | | | | | | | | | | | | | | | |
| U. S. Motor | .0452 | .05 | .04 | .0454 | .0450 | .0430 | .05¼ | .03½ | .0453 | .0406 | .0751 | .08½ | .05⅛ | .0816 | .0691 |
| 64-66 375 | .0482 | .05½ | .04¼ | .0488 | .0470 | .0497 | .06⅛ | .03¾ | .0542 | .0452 | .0888 | .10 | .06 | .0956 | .0826 |
| Los Angeles, Calif.: | | | | | | | | | | | | | | | |
| U. S. Motor, 53-55 gravity | .0381 | .04¼ | .03¾ | .0387 | .0375 | .0438 | .07 | .03¼ | .0451 | .0425 | .0633 | .06¾ | .04¾ | .0634 | .0631 |
| U. S. Motor, 65 octane number | .0489 | .... | .... | .0500 | .0498 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| KEROSENE— | | | | | | | | | | | | | | | |
| Gulf Coast: | | | | | | | | | | | | | | | |
| 41-43 prime white | .0429 | .05 | .04¾ | .0421 | .0438 | .0371 | .04¼ | .03¼ | .0409 | .0349 | .0588 | .07 | .04 | .0632 | .0547 |
| 41-43 water white | .0445 | .04½ | .04¼ | .0441 | .0449 | .0424 | .05¼ | .03½ | .0499 | .0372 | .0668 | .08 | .05 | .073 | .0610 |
| Los Angeles, Calif.: | | | | | | | | | | | | | | | |
| 41-43 water white | .0389 | .04 | .03¾ | .0393 | .0385 | .0386 | .04¾ | .03½ | .0448 | .0309 | .0417 | .04¾ | .03¾ | .0407 | .0427 |
| LUBRICANTS— | | | | | | | | | | | | | | | |
| New York (Bayonne N. J.): | | | | | | | | | | | | | | | |
| 600 S.R. in barrels | .2111 | .23 | .19 | .2035 | .2185 | .1783 | .22 | .15½ | .1624 | .1925 | .236 | .31½ | .16½ | .303 | .1746 |
| 600, Pennsylvania Flash | .2337 | .26 | .19 | .2398 | .2275 | .2229 | .26½ | .19½ | .2098 | .2360 | .3267 | .40 | .23½ | .39 | .2681 |
| 140-150 Bright Stocks (light) | .2971 | .34 | .24 | .2935 | .3008 | .2803 | .35½ | .24¼ | .2535 | .3071 | .3935 | .52 | .26 | .4812 | .30 |
| 140-150 Bright Stocks (dark) | .2792 | .32 | .23½ | .2815 | .2765 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

*Octane Ratings—The quotations cover price ranges on gasolines in which no octane rating is given. In the case of U. S. Motor gasoline and 60-62 400 endpoint gasoline price differentials based on 57-65 octane and 65 and above octane are given in weekly quotations. The premium for 57-65 octane varied the first six months, from one-fourth to five-eighths cent over products in which no octane rating was guaranteed. In the case of 65 and above octane, the premium varied from one-half to three-fourths cent. †For Arkansas, Louisiana and Mississippi delivery. ‡There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. §Prices for furnace oils are for zero cold test grades under 190° F. flash and good odor.

## Average Prices on Many Products Show Increases

(Continued from Page 64)

The improvement in these products appears to have been largely due to a decreased supply although the domestic demand was much better than expected by many. Refiners curtailed their crude oil runs to stills throughout the United States in order not to flood the gasoline market. This curtailment of crude runs coupled with expansion of cracking facilities at many refineries tended to reduce the production of kerosene and distillates more than the reduction in demand and brought about a statistical situation which was responsible for the improved prices.

Representative of the Mid-Continent and Middle West, the 41-43 water white grade of kerosene in Oklahoma brought an average price of 3.15 cents in 1932 which compares with 2.15 cents in 1931 and 3.58 cents in 1930. In Pennsylvania, the 45 gravity kerosene averaged 4.51 cents per gallon in 1932, a half cent increase from the 4-cent average of 1931. In California, the 38-40 gravity kerosene brought an average price of 3.98 cents for domestic movement, a decrease from the 4.25-cent average in 1931.

The greatest recovery in furnace oils was during the last half of 1932. Distillates, gas oils and high gravity fuels suitable for special fuels in heating homes, hotels, apartment houses and similar buildings, became scarce early in the fall, particularly at interior points, and prices advanced rapidly. In Oklahoma, a 32-36 straw gas oil of low cold test and low flash commonly used as furnace distillate brought an average price of 1.79 cents the first half of 1932 but jumped to an average of 2.56 cents for the last half. The U.G.I. gas oil in the same State averaged 1.22 cents the first of 1932 and 1.71 cents the last half.

### Heavy Fuel Oils

At interior refineries, due to the decreased supply, most grades of residual fuel oils also increased in price. In Oklahoma, industrial fuel oil under 16 gravity brought an average price of 25.96 cents the first six months of 1932 and 39.04 cents the last half with an average of 32.5 cents for the year. This compares with an average of 29.04 cents in 1931 and 52.25 cents in 1930. There were similar advances in the high gravity fuels throughout the Mid-Continent and Middle West.

The average price situation in regard to fuels at coastal points was not so favorable. In California, bunker fuel at tidewater brought an average price of 55.48 cents at Los Angeles. This is a decrease when compared with the average of 58.36 cents for 1931 and 63.46 cents for 1930. Along the East Coast, the price at Bayonne, N. J., is representative of conditions. Bunker fuel oil at that point brought an average price of 72.69 cents for 1932, the lowest average in the history of the product. The price dropped to a low of 60 cents the latter part of 1931 and this price continued early in 1932. Later, the price was advanced to a high of 85 cents but dropped to 75 cents toward the close of the year. The average price for Bunker C at the Gulf Coast was also lower in 1932 than in 1931.

### Lubricants

There was considerable fluctuation in the prices for steam refined cylinder stocks and bright stocks during the year. In Pennsylvania, the 10 to 15 pour test bright stocks fluctuated between a high of 28 cents and a low of 19 cents. The average price for the year was 24.66 cents which compares with 20.94 cents in 1931 and 30.73 cents in 1930.

In Oklahomo, the lowest price for the year was 15½ cents for the 150-160 zero to 10 cold test grade and 22 cents was the high. The yearly average was 18.37 cents. Average prices for representative grades of paraffin neutral oils both in Pennsylvania and the Mid-Continent were slightly lower in 1932 than in 1931. The same situation applied to the naphthenic base neutrals in California and the Gulf Coast.

The average price for 124-126 wax in Oklahoma for 1932 was practically the same as in 1931. In New York and Pennsylvania the prices were fractionally lower.

## Crude Oil Production in 1932 Falls to 6-Year Low

(Continued from Page 63)

comes the Seminole Field in Oklahoma, opened in 1926, which has produced 496,180,812 bbls. of average 38 gravity oil.

Third in rank is Long Beach, California, opened in 1921, which has made a record of 477,379,860 bbls. of average 27 gravity oil, followed by Santa Fe Springs, also a California field, producing crude oil of 30 gravity to the extent of 352,625,403 bbls. since it opened in 1920. Smackover, Arkansas, producing since 1922, both light and heavy gravity crude averaging about 24 degrees, has made a record of 327,706,546 bbls., ranking fifth among producing fields. Then comes the Coalinga Field in California, opened in 1896, a 16 gravity oil field, which has produced 322,793,849 bbls.

The famous old Cushing Field in Oklahoma, opened in 1912, producing crude of 37 gravity on an average, has reached a mark of 310,389,587 bbls. Eighth on the list is Bradford, in Pennsylvania and New York, mostly in the former State, which has produced 309,094,643 bbls. of crude averaging 44 gravity. It was opened in 1875. Kern River, California, opened in 1900, follows Bradford. It has produced 289,763,856 bbls. of 15 average gravity crude.

The Augusta-Eldorado Field in Kansas, made up of all the pools in Butler County, has yielded 251,022,548 bbls. since 1916, the oil averaging 34 gravity. Salt Creek, Wyoming, opened in 1889, has made a record of 244,244,297 bbls. of oil averaging 36 gravity, and then comes East Texas, twelfth in line among the great producing fields, with a record of 229,691,433 bbls. since the latter days of 1930, the oil averaging 39 gravity.

In the very short time it has been producing, East Texas has far exceeded in output such notable fields as Oklahoma City, in Oklahoma, with its total of 121,643,332 bbls. since December, 1928; Glenn Pool, Oklahoma, 198,108,132 bbls. since 1906; Burbank, Oklahoma, 183,762,117 bbls. since 1920; Huntington Beach, California, opened in 1920 and having produced 189,464,519 bbls.; Yates, Texas, opened in 1926, and which has produced 159,212,281 bbls.

The East Texas Field produced more oil last year than Spindletop. Texas has since it was opened in 1901, its record having been 118,768,009 bbls. in 31 years but it is well to recall that Spindletop consisted of 452 producing acres which yielded about 260,000 bbls. per acre. East Texas has over 114,000 acres to draw from, and if it produces even one-third as much oil per acre as the average per acre production of the 43 other leading fields in the United States it will pass the billion mark, the average of the 43 fields having been about 13,000 bbls. per acre.

# Retail Motor Fuel Market Failed to Hold Gains Recorded During the First Half of Year

By W. T. ZIEGENHAIN

The increase in the average net filling station price in the United States over the first six months of 1932 was wiped out by the close of the year. Over a period of 10 months, beginning September 1, 1931, the average station price slowly but consistently advanced through June, 1932, and then in July the first evidence of a general weakening of the retail market came when prices were reduced at key points scattered throughout the country east of the Rocky Mountains.

A revision downward was first posted at important centers in the New England States, followed the next day by reductions in the southern states and in Ohio. The weakness in the general retail market was further evidenced by price reduction at scattered points throughout the less populated western states and price drops were also posted in Salt Lake City, Utah, and Boise, Idaho.

The bad start in July led to a greater number of price cuts in August which extended throughout the East Atlantic, the Southeastern, Gulf Coast and the Rocky Mountain States, but the adjustments were restricted to the larger cities in most cases. The explanation was given at the time that the reductions were made to meet local conditions. These "local" bad spots grew until general reductions were posted through much of these territories in September.

Then in October a strong effort was made to bolster up the weakening retail market and price advances were then posted at many of these same key points. In several instances the price was advanced two and three times within the month. By November 1, a much more favorable picture was presented from the standpoint of the average price but this improvement soon proved to be temporary. In November scattered price drops were mixed with some advances, the net effect of which was a small decrease in the average price by December 1.

The trend toward still lower prices continued throughout December as the result of many scattered reductions and impetus was given this later in the month because of the reduction in crude prices posted throughout practically all important fields in the Mid-Continent, Gulf Coast and central states about the middle of the month.

### Little Progress in Year

On January 1, the average net price was 12.58 cents and this was only .37 cent above the lowest average for all times. The lowest average was recorded on June 1 and September 1, 1931, and during a period when crude prices were permitted to go to unprecedented lows. So, the relatively low average of retail prices at the close of 1932 undoubtedly reflected the unsettled crude market just as it had done in 1931.

### Average Slightly Higher

Although 1932 closed with a lower average net retail price than 1931, the average for the year 1932 was slightly above that of the previous year. The difference was a little less than a quarter cent per gallon. The above prices are based upon the market quotations posted on the regular grade. Although there is a slight increase in the average price for the year it is doubtful that it follows that the industry received any more for its products at filling stations. In fact, it is entirely possible that less money was received than in 1932, regardless of the volume of motor fuel sold in 1932 compared to 1931. This lesser revenue is believed likely because of the greater importance of the volume of third grade gasoline sold compared to the regular grade and the rather disappointing showing the sales of the premium grade showed.

Throughout the country the premium grade sold from 2 to 3 cents above the price of the regular grade and the regular grade sold from 1½ to 4 cents above the third grade price. Over a period of a year any material shifting of the relative volume of one grade sold compared to that of the other makes a very large difference in the total revenue.

### Change by Areas

The East Coast and West Coast markets suffered more than the inland markets if one is to take the prices on the first of the year and on the last of the year in each area as the basis. To permit this comparison the states were grouped in accordance with their natural geographic location. This arrangement is shown in the accompanying table. It will be seen that little change occurred in the average price in the central, southeastern and middle western states while a drop of one-half cent is shown in the case of the Atlantic and New England States and a drop of 2.2 cents in the case of the Western Coast States.

The lower markets along the coast probably reflect the loss in the foreign markets and the need to intensify sales efforts in the coastal states on the part of the local refiners in order to dispose of their products. The import tax placed on crude in July and the loss of foreign refined oil markets during the year due to the completion of major foreign refining facilities decreased coastal operations in a slightly greater degree than inland refinery operations but there still remained a surplus of gasoline to be absorbed in these areas. This situation was also aggravated by the importation of foreign gasoline and naphtha during the year. Most of this material was unloaded for consumption in the Detroit area and around New York City. However, as a result of a stricter interpretation of the new Federal import tax law, these items have been practically eliminated as a market factor.

In the same manner as foreign gasoline disturbed the Eastern Coast market, some concern was shown in the case of a shipment of East Texas gasoline from a Gulf Coast terminal to Seattle, Wash. The quantity was relatively small but the transaction showed what could be done whenever there exists a wide difference in West Coast and Mid-Continent prices during a period when tanker rates are low.

In the period of five years we have seen developed the "super-station," "grease palace," the sale of tires, batteries and

## Trend of Gasoline Service Station Prices

AVERAGE SERVICE STATION PRICES IN CENTS IN 50 REPRESENTATIVE CITIES, EXCLUSIVE OF TAXES

| | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 |
|---|---|---|---|---|---|---|---|---|---|
| January 1 | 16.89 | 16.45 | 18 82 | 20.25 | 16.41 | 18.32 | 17.23 | 14.56 | 12.87 |
| February 1 | 20 20 | 19.37 | 18.91 | 20.16 | 16.38 | 17.59 | 16.96 | 14.83 | 12.97 |
| March 1 | 20.67 | 21.70 | 19.89 | 19.63 | 16.80 | 17.21 | 16.28 | 14.86 | 12.91 |
| April 1 | 21.45 | 21.30 | 21.14 | 18.79 | 17.16 | 17.38 | 15.92 | 13.68 | 13.18 |
| May 1 | 21 48 | 20.99 | 21.13 | 17.97 | 17.47 | 17.48 | 16.95 | 12.40 | 13.59 |
| June 1 | 21.28 | 20.74 | 22.13 | 17.25 | 17.56 | 18.32 | 17.01 | 12.21 | 13.68 |
| July 1 | 20.42 | 21.99 | 22.22 | 17.38 | 17.56 | 18.48 | 16.56 | 12.46 | 14.21 |
| August 1 | 19.19 | 22.02 | 22.19 | 17.39 | 18.12 | 18.22 | 16.47 | 12.41 | 14.02 |
| September 1 | 18.45 | 19.45 | 22.09 | 17.13 | 18.40 | 18.22 | 16.26 | 12.21 | 13.65 |
| October 1 | 16.52 | 18.41 | 21.58 | 16.81 | 18.70 | 18.32 | 15.93 | 12.34 | 12.46 |
| November 1 | 16.29 | 18.20 | 20.58 | 16.72 | 18.05 | 17.84 | 15.41 | 12.32 | 13 04 |
| December 1 | 16.41 | 18.45 | 20.10 | 16.71 | 18.39 | 17.51 | 14.96 | 12.89 | 12.96 |
| Average | 19.10 | 19.92 | 20.92 | 18.01 | 17.63 | 17.91 | 16.23 | 19.09 | 13.30 |

COMPARISON OF NET SERVICE STATION PRICES JANUARY 1, 1932 AND 1933, ACCORDING TO GEOGRAPHIC GROUPINGS

**Atlantic and New England States**

| | 1932 | 1933 |
|---|---|---|
| Augusta, Me. | 14.8 | 14.5 |
| Manchester, N. H. | 14 4 | 14.5 |
| Burlington, Vt. | 15.3 | 15.0 |
| Hartford, Conn. | 15.5 | 12.5 |
| Springfield, Mass. | 12.5 | 13.5 |
| New York, N. Y. | 12.3 | 10.5 |
| Philadelphia, Pa. | 12 0 | 12 0 |
| Providence, R. I. | 10.5 | 11.5 |
| Newark, N. J. | 12.7 | 11.3 |
| Baltimore, Md. | 12.4 | 11.0 |
| Dover, Del. | 13.0 | 13.5 |
| Average | 13.2 | 12.7 |

**Central**

| | 1932 | 1933 |
|---|---|---|
| Fargo, N. D. | 14.9 | 16.1 |
| Huron, S. D. | 13.4 | 14.5 |
| Wichita, Kans. | 10 8 | 10.9 |
| Omaha, Neb. | 11.9 | 13.9 |
| Tulsa, Okla. | 11.0 | 12.0 |
| Dallas, Tex. | 12.0 | 11.0 |
| Little Rock, Ark. | 12.0 | 9 5 |
| Kansas City, Mo. | 11.9 | 11.1 |
| Des Moines, Iowa | 12.4 | 12.9 |
| Duluth, Minn. | 13.5 | 14.9 |
| Milwaukee, Wis. | 12 1 | 12.3 |
| Chicago, Ill. | 12.0 | 11.1 |
| Detroit, Mich. | 11.5 | 11.0 |
| Indianapolis, Ind. | 12.4 | 13.4 |
| Cleveland, Ohio | 14.0 | 12.0 |
| Average | 12.4 | 12.4 |

**Southeastern**

| | 1932 | 1933 |
|---|---|---|
| Norfolk, Va. | 12 5 | 11.1 |
| Charleston, W. Va. | 14.7 | 12.4 |
| Louisville, Ky. | 12.0 | 11.0 |
| Memphis, Tenn. | 10.5 | 10.0 |
| Atlanta, Ga. | 13 0 | 12.0 |
| Charlotte, N. C. | 11.0 | 13.3 |
| Charleston, S. C. | 12.5 | 11.1 |
| Jackson, Miss. | 10.0 | 11.0 |
| Birmingham, Ala. | 13.0 | 14.0 |
| New Orleans, La. | 8 5 | 9.0 |
| Jacksonville, Fla. | 13 0 | 12.0 |
| Average | 11.8 | 11.5 |

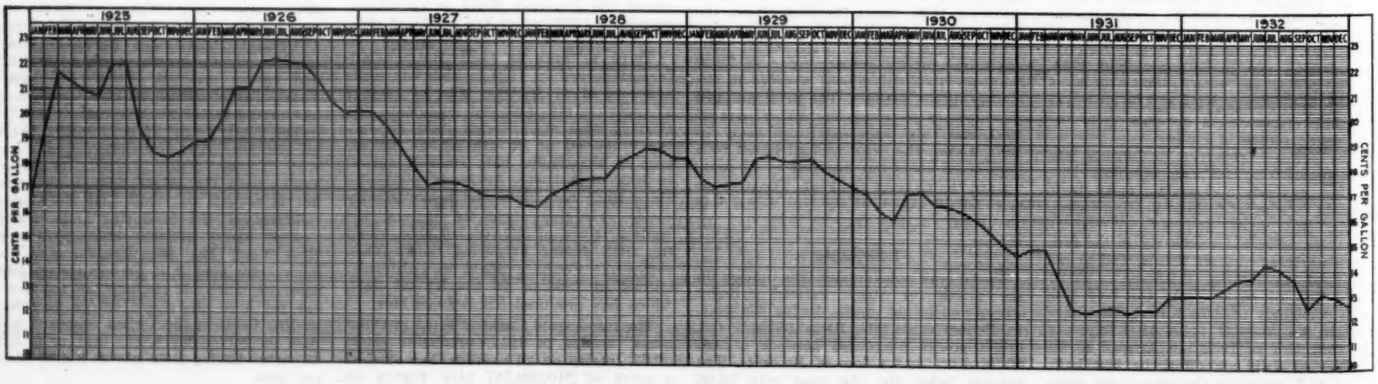
**Midwestern**

| | 1932 | 1933 |
|---|---|---|
| Helena, Mont. | 19.0 | 19.0 |
| Boise, Idaho | 19.0 | 17.5 |
| Casper, Wyo. | 14 0 | 14 0 |
| Reno, Nev. | 16.0 | 17.0 |
| Salt Lake City, Utah | 16.5 | 15.0 |
| Denver, Colo. | 11.0 | 13.0 |
| Phoenix, Ariz. | 12.0 | 15 5 |
| Albuquerque, N. Mex. | 15.0 | 13 0 |
| Average | 15.3 | 15.5 |

**Western Coast**

| | 1932 | 1933 |
|---|---|---|
| San Francisco, Calif. | 13.5 | 14.0 |
| Portland, Ore. | 14.0 | 10.4 |
| Seattle, Wash. | 14 0 | 10.4 |
| Average | 13.8 | 11.6 |

## Trend of Gasoline Service Station Prices, Exclusive of Taxes, in 50 Representative Cities Throughout the United States



other accessories, the introduction of the third grade of motor fuel, etc. But along with these we have seen developed the trackage station, the combination hamburger stand and filling station, "night-riders" and racketeering. Some of these factors have been constructive and others have been destructive and no one of them has gone into use without strong criticism or opposition. If one cause were to be given for bringing about these changes it undoubtedly would be that declining profits forced them. Even where the change was an improvement there often was insufficient profit to cause its general adoption.

### State Taxes

There were relatively few tax changes in 1932 but those which did take place were upward and not in the direction the industry is endeavoring to force them. On June 1, New York advanced its tax to 3 cents, which includes a 1-cent emergency tax. This emergency levy will be discontinued June 30, 1933, when the tax reverts to 2 cents. Mississippi advanced its tax to 6 cents on June 1. In addition to these upward revisions, a 1-cent Federal tax was placed in effect on June 21, which raised the average gasoline tax over the country to 5.16 cents on the close of the year.

## Gasoline Service Station Prices in Effect During 1932, Exclusive of Taxes, in 50 Representative Cities With Amount and Date of Changes

WITH GASOLINE TAXES IN EFFECT JANUARY 1, 1932, AND 1933

| | Prices Jan. 1, | Price changes in first 6 months | | | | | | | | | Price changes in second 6 months | | | | | | | | | | Price Jan. 1, | Federal and state taxes Jan. 1, | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1932 | 1/2 | 4/20 | 4/28 | 5/20 | 6/3 | 6/30 | | | | 8/17 | 9/16 | 10/3 | 10/10 | 10/26 | 11/5 | 12/7 | 12/22 | | | 1933 | 1932 | 1933 |
| Birmingham, Ala. | 13.0 | 14.5 | 15.0 | 15.5 | 13.0 | 14.0 | 15.0 | .... | .... | .... | 13.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 13.0 | 14.0 | .... | .... | 14.0 | *6.0 | *8.0 |
| Phoenix, Ariz. | 12.0 | 6/24 13.0 | 6/27 15.5 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 15.5 | 5 0 | 6.0 |
| Little Rock, Ark. | 12.0 | 2/15 11.5 | 3/24 12.0 | 4/7 12.5 | 4/14 13.0 | 5/9 13.5 | 5/23 13.0 | 6/16 11.0 | 6/18 12.0 | .... | 8/25 11.0 | 9/24 10 5 | 10/26 11.5 | 11/11 9.5 | .... | .... | .... | .... | .... | .... | 9.5 | 6.0 | 7.0 |
| San Francisco, Calif. | 13.5 | 4/9 11.5 | 6/27 14.0 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 14 0 | 3 0 | 4.0 |
| Denver, Colo. | 11.0 | 3/1 13.0 | 4/4 14.0 | 4/14 15.0 | 5/11 16.0 | .... | .... | .... | .... | .... | 8/20 14 0 | 12/10 13.0 | .... | .... | .... | .... | .... | .... | .... | .... | 13 0 | 4.0 | 5.0 |
| Hartford, Conn. | 15.5 | 1/19 13.5 | 3/25 14.0 | 4/16 14.5 | .... | .... | .... | .... | .... | .... | 8/24 13.0 | 9/28 12.0 | 10/21 13.0 | 11/16 13.5 | 12/23 12.5 | .... | .... | .... | .... | .... | 12.5 | 2 0 | 3.0 |
| Dover, Del. | 13.0 | 3/28 14.0 | 6/27 14.5 | .... | .... | .... | .... | .... | .... | .... | 8/19 13.5 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 13 5 | 3 0 | 4.0 |
| Jacksonville, Fla. | 13.0 | 1/14 12.0 | 2/29 13.0 | 4/9 11.0 | 4/20 11.5 | 4/28 12.0 | 5/3 13.0 | 6/30 12.0 | .... | .... | 9/16 11.0 | 9/19 9.0 | 9/26 8.0 | 9/27 7.0 | 10/11 9.0 | 10/26 11.0 | 11/14 12.0 | .... | .... | .. | 12.0 | 7 0 | 8 0 |
| Atlanta, Ga. | 13.0 | 1/9 13.5 | 4/1 15.0 | 4/20 15.5 | 4/28 16.0 | 5/28 15.0 | 6/30 16.0 | .... | .... | .... | 7/23 15.0 | 9/28 14.0 | 10/13 12.0 | 10/26 13.0 | 12/22 12.0 | .... | .... | .... | .. | .... | 12.0 | 6.0 | 7.0 |
| Boise, Idaho | 19.0 | 4/1 16.0 | 4/1 15.0 | 6/14 19.0 | 6/28 20.5 | .. | .... | .... | .... | .... | 7/15 19.5 | 10/15 17.5 | 10/27 16.5 | 11/21 17.5 | .... | .. | .... | .... | .... | .. | 17.5 | 5.0 | 6.0 |
| Peoria, Ill. | 11.0 | 1/6 12.5 | 4/15 13.5 | 6/21 13.6 | .... | .... | .... | .... | .... | .... | 9/26 11.6 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 11 6 | 3.0 | 4.0 |
| Chicago, Ill. | 12.0 | 4/15 13.0 | 6/21 13.1 | .... | .... | .... | .... | .... | .. | .. | 9/16 11.1 | .... | .. | .... | .... | .... | .... | .... | .. | .... | 11.1 | 3.0 | 4.0 |
| Indianapolis, Ind. | 12.4 | 3/16 12.8 | 4/15 13.3 | 6/21 13.4 | .... | .... | .... | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 13.4 | 4 0 | 5.0 |
| Des Moines, Iowa | 10.0 | 1/23 12.6 | 4/15 13.6 | 6/21 13.7 | .... | .... | .... | .... | .. | .... | 9/16 11.9 | 11/29 12.9 | .... | .... | .... | .... | .... | .... | .... | .... | 12 9 | 3.0 | 4.0 |
| Wichita, Kans. | 10.8 | 4/15 10.9 | 4/23 11.9 | 6/21 12.0 | .... | .... | .... | .... | .... | .. | 8/31 10.0 | 10/29 10.9 | .... | .. | .... | .... | .... | .... | .... | .... | 10 9 | 3.0 | 4.0 |
| Louisville, Ky. | 12.0 | 1/19 11.0 | 3/25 12.5 | 4/1 11.5 | 4/20 12.0 | 4/28 12 5 | 4/29 12.0 | .... | .... | .... | 9/22 11.0 | 10/14 10.0 | 10/26 11.0 | .... | .... | .... | .... | .... | .... | .... | 11 0 | 5.0 | 6.0 |
| New Orleans, La. | 8.5 | 1/6 9.5 | 2/5 10.0 | 3/24 10.5 | 3/29 11.5 | 4/8 12.5 | 4/14 13.0 | 5/9 13.5 | 5/23 13.0 | 6/18 14.0 | 7/2 12.0 | 8/6 11.0 | 9/24 10 5 | 10/15 8.5 | 10/29 9.5 | 12/31 9.0 | .... | .... | .... | .... | 9.0 | *6.0 | *7.0 |
| Augusta, Me. | 14.8 | 3/25 14.3 | .... | .... | .... | .... | .... | .... | .... | .... | 7/1 14.8 | 8/24 14.0 | 9/28 13.0 | 10/21 14.0 | 11/16 14.5 | .... | .... | .... | .... | .. | 14 5 | 4.0 | 5.0 |
| Baltimore, Md. | 12.4 | 2/17 4.9 | 3/21 12.4 | 4/18 12.9 | 6/18 13.9 | .... | .... | .... | .... | .... | 9/23 10.7 | 10/21 11.7 | 12/20 11.0 | .... | .... | .... | .... | .... | .... | .... | 11.0 | 4.0 | 5.0 |
| Springfield, Mass. | 13.5 | 1/19 13.5 | 3/8 11.5 | 3/25 12.3 | 3/30 14.0 | 4/2 14.5 | .... | .... | .... | .... | 7/23 13.0 | 9/28 12.0 | 10/21 13.0 | 11/16 13.5 | .... | .... | .... | .... | .... | .... | 13.5 | 3.0 | 4.0 |
| Detroit, Mich. | 11.5 | 4/15 9.5 | 6/21 9.6 | .... | .... | .... | .... | .... | .... | .... | 9/1 8.6 | 9/14 8.5 | 11/29 9.5 | 12/16 11.0 | .... | .... | .... | .... | .... | .. | 11 0 | 3.0 | 4.0 |
| Duluth, Minn. | 13.5 | 4/15 14.6 | 6/21 14.7 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 14.7 | 3 0 | 4 0 |
| Jackson, Miss. | 10.0 | 1/15 11.5 | 2/5 10.5 | 4/1 12.5 | 4/20 13.5 | 6/1 13.0 | .... | .... | .... | .... | 9/14 11 0 | 10/26 13.0 | 12/24 11.0 | .... | .... | .... | .... | .... | .... | .... | 11.0 | 5.5 | 7.0 |
| Kansas City, Mo. | 11.9 | 4/15 13.0 | 6/21 13.1 | .... | .... | .... | .... | .... | .. | .... | 7/19 11.1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 11.1 | *3.0 | *4.0 |
| Helena, Mont. | 19.0 | 1/4 18.0 | 4/15 19.0 | .... | .... | .... | .... | .... | .... | .... | 10/18 20.0 | 12/24 19.0 | .... | .... | .... | .... | .... | .... | .... | .... | 19 0 | 5 0 | 6.0 |
| Omaha, Neb. | 11.9 | 4/16 12.9 | .... | .... | .... | .... | .... | .... | .. | .. | 11/8 13.9 | .... | .... | .... | .. | .. | .... | .... | .... | .... | 13.9 | 4.0 | 5.0 |
| Reno, Nev. | 16.0 | 6/24 16.5 | 6/27 19.0 | .... | .... | .... | .... | .... | .. | .. | 8/30 17.0 | .... | .... | .... | .... | .... | .... | .... | .... | .. | 17.0 | 4 0 | 5 0 |
| Newark, N. J. | 12.7 | 2/17 13.2 | 3/23 12.7 | 4/18 13.2 | 6/18 14.2 | 6/21 13.2 | .... | .... | .... | .... | 9/23 11.0 | 10/21 12 0 | 12/20 11.3 | .... | .... | .... | .... | .... | .... | .... | 11.3 | 3.0 | 4.0 |
| Albuquerque, N. Mex. | 15.0 | 1/5 14.0 | 3/26 11.0 | 4/14 12.0 | 5/3 14.0 | .... | .... | .... | .... | .... | 9/23 12.0 | 10/28 13.0 | .... | .... | .... | .... | .... | .... | .... | .... | 13.0 | 5.0 | *7.0 |
| New York, N. Y. | 12.3 | 3/18 12.5 | 3/25 13.0 | 4/16 13.5 | 5/21 9.5 | 6/17 10.5 | .... | .... | .. | .. | 8/24 13.0 | 9/28 11 0 | 10/21 12 0 | 11/16 12.5 | 12/21 10.5 | .... | .... | .... | .... | .... | 10 5 | 2.0 | 4.0 |
| Charlotte, N. C. | 11.0 | 3/1 13.0 | 3/23 14.0 | 4/18 15.0 | 5/2 15.2 | 6/18 16 2 | .... | .... | .... | .... | 9/23 13.0 | 10/21 14 0 | 12/20 13.3 | .... | .... | .... | .... | .... | .... | .... | 13.3 | 6.0 | 7 0 |
| Fargo, N. D. | 14.9 | 4/15 16.0 | 6/21 16.1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 16.1 | 3.0 | 4 0 |
| Cleveland, Ohio | 14.0 | 1/16 12.0 | 3/16 12.5 | 3/29 13.0 | 4/18 14.0 | 6/17 13.0 | .... | .... | .... | .... | 7/2 13 5 | 9/1 12 5 | 9/28 12.0 | 10/16 12.5 | 10/27 13.0 | 12/21 12.0 | .... | .... | .... | .. | 12.0 | 4.0 | 5.0 |
| Tulsa, Okla. | 11.0 | 4/5 12.0 | 4/14 13.0 | .... | .... | .... | .... | .... | .... | .. | 8/13 11.0 | 9/26 9.0 | 10/20 12.0 | .... | .... | .... | .... | .... | .... | .... | 12.0 | 4.0 | 5.0 |
| Portland, Ore. | 14.0 | 4/1 10.0 | 4/18 8.0 | 5/7 11.0 | 5/24 12.5 | 6/27 15.0 | .... | .... | .... | .... | 11/24 10.9 | 12/3 10.4 | .... | .... | .... | .... | .... | .... | .... | .... | 10 4 | 4.0 | 5.0 |
| Philadelphia, Pa. | 12.0 | 3/21 13 0 | 6/27 13.5 | .... | .... | .... | .... | .... | .... | .... | 8/19 13 0 | 9/26 12 0 | 10/22 13.0 | 11/23 12.0 | .... | .... | .... | .... | .... | .... | 13.0 | 3.0 | 4.0 |
| Providence, R. I. | 10.5 | 1/9 11.5 | 1/19 12.5 | 3/25 13.0 | 4/16 13.5 | 5/27 12.5 | .... | .... | .... | .... | 7/21 11.5 | 7/23 10.5 | 8/17 11.5 | 8/24 12.5 | 9/10 11.5 | 9/28 11.0 | 10/21 12.0 | 11/16 12.5 | 11/21 12.0 | 12/22 11.5 | 11.5 | 2.0 | 3.0 |
| Charleston, S. C. | 12.5 | 2/17 12.0 | 3/23 12.5 | 4/18 13.0 | 6/18 14.0 | .... | .... | .... | .... | .... | 9/23 10.8 | 10/21 11 8 | 12/20 11.1 | .... | .... | .... | .... | .... | .... | .... | 11.1 | 6.0 | 7.0 |
| Huron, S. D. | 13.4 | 2/20 12.0 | 4/15 13.0 | 4/21 14.4 | 6/21 14.5 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 14.5 | 4.0 | 5.0 |
| Memphis, Tenn. | 10.5 | 3/7 11.5 | 3/24 12.0 | 3/29 12.5 | 4/7 13.0 | 4/14 13.5 | 5/7 14.0 | 5/23 13.5 | 6/18 14.5 | .... | 7/2 12.5 | 8/6 10.0 | 9/7 8 0 | 9/24 7.0 | 10/29 9.0 | 11/8 10.0 | 11/23 11.0 | 12/22 10.5 | 12/31 10.0 | .... | 10.0 | 7.0 | 8.0 |
| Dallas, Tex. | 12.0 | 4/1 13.0 | 4/13 14.0 | 6/23 13.0 | .... | .... | .... | .... | .... | .... | 9/14 12 0 | 9/21 11.0 | 10/24 12 0 | 12/13 11.0 | .... | .... | .... | .... | .... | .... | 11.0 | 4.0 | 5.0 |
| Salt Lake City, Utah | 16.5 | 4/14 17.0 | 4/30 17.5 | 6/28 19.0 | .... | .... | .... | .... | .... | .... | 7/15 17.0 | 8/12 16 0 | 11/7 15.0 | .... | .... | .... | .... | .... | .... | .... | 15.0 | 4.0 | 5.0 |
| Burlington, Vt. | 15.3 | 3/25 14.8 | .... | .... | .... | .... | .... | .... | .... | .... | 7/1 14.5 | 8/24 14.5 | 9/28 13 5 | 10/21 14.5 | 11/16 15.0 | .... | .... | .... | .... | .... | 15.0 | 4.0 | 5.0 |
| Norfolk, Va. | 12.5 | 2/17 12.0 | 3/23 12.5 | 4/18 13.0 | 6/18 14.0 | .... | .... | .... | .... | .... | 2/23 10.8 | 10/21 11 8 | 12/20 11.1 | .... | .... | .... | .... | .... | .... | .... | 11.1 | 5.0 | 6 0 |
| Washington, D. C. | 12.9 | 2/17 13.4 | 3/23 12.9 | 4/18 13.4 | 6/18 14.4 | .... | .... | .... | .... | .... | 9/23 11 2 | 10/21 12.2 | 11/19 10 2 | .... | .... | .... | .... | .... | .... | .... | 10.2 | 2 0 | 3.0 |
| Charleston, W. Va. | 13.7 | 2/17 13.2 | 3/23 13.7 | 4/18 14.2 | 5/2 14.3 | 6/18 15.3 | .... | .... | .... | .... | 9/23 12.1 | 10/21 13 1 | 12/20 12.4 | .... | .... | .... | .... | .... | .... | .... | 12.4 | 4 0 | 5 0 |
| Milwaukee, Wis. | 12.1 | 4/15 13.2 | 6/21 13.3 | .... | .... | .... | .... | .... | .... | .... | 8/10 12 3 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 12.3 | 4 0 | 5.0 |
| Casper, Wyo. | 14.0 | 4/14 15.0 | .... | .... | .... | .... | .... | .... | .... | .... | 12/10 14 0 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 14.0 | 4.0 | 5 0 |
| Seattle, Wash. | 14.0 | 4/1 10.0 | 4/18 9.0 | 4/27 8.0 | 5/7 11.0 | 5/24 12.5 | 6/27 15.0 | .... | .... | .... | 11/24 10.9 | 12/3 10 4 | .... | .... | .... | .... | .... | .... | .... | .. | 10 4 | 5.0 | 6.0 |
| Minneapolis, Minn. | 11.5 | 1/28 13.3 | 4/15 14.2 | 6/21 14.4 | .... | .... | .... | .... | .... | .... | 8/19 13.4 | 9/16 11.4 | .... | .... | .... | .... | .... | .... | .... | .. | 11.4 | 3.0 | 4.0 |
| Average price | 12.87 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 12.58 | 4 09 | 5.16 |

*Includes 1-cent city or parish tax. †Price changed July 1.

# Oil Pipe Line Construction in United States the Past Year Was Principally on Short Lines

The tremendous campaign of pipe line building that followed the discovery of big fields in Oklahoma, West Texas, East Texas and the Texas Panhandle subsided in 1931 leaving every oil field plenty of outlet—more in fact than the crude oil market warrants. Therefore, major pipe line building in 1932 was at the lowest ebb in several years. Most of the work done in the United States was in short lines and extensions. Taken as a whole considerable work was done in these shorter lines and it was well scattered.

The largest line completed on the American continent in 1932 was opened for service in Mexico early last year and the largest line projected and started last year was the great Iraq pipe line in Asia.

### Construction on Gulf Coast

A number of pipe lines were laid on the Gulf Coast in 1932. Following the proving of oil production at Conroe, Montgomery County, in June, Humble Pipe Line Co. laid an 8-inch line from the field to Satsuma, a station on its North Texas-Gulf Coast trunk, a distance of 28 miles. Later the Texas Pipe Line Co. provided a second pipe line outlet for Conroe by laying an 8-inch line from the field to a connection with its main trunk at a point near Spring, northern Harris County, a distance of 14 miles. A number of other companies have lines running through or reasonably close to the Conroe district but so far have made no connections. Tide Water Oil Co. put in a gathering system at Conroe and has been offering its oil to the Texas Pipe Line Co. for transportation to tidewater. However, that company since the first of the year has completed surveys for a line of its own from Conroe to Houston although details have not been revealed.

Humble Pipe Line Co. provided a second pipe line outlet for the Rabbs Ridge Field by extending its Sugarland-Pierce Junction 12-inch line to the field with 8-inch pipe. This required only about 7 miles of pipe.

The biggest coastal line was that which Yount Lee Oil Co. laid from its High Island Field of Galveston County to its tank farm and terminal at Beaumont, a distance of 45 miles. The company laid 12-inch pipe.

### In East Texas

There was no pipe line building of importance in the East Texas Field last year, gathering lines and connecting lines between leases and refineries or loading racks being the principal work done. The longest line of the year was a 12-mile second-hand 4-inch line laid from the west edge of Gregg County to Big Sandy, where a loading rack was erected on the Cotton Belt Railroad, and where a 2,000-bbl. refinery may be built later.

The International Pipe Line Co. was formed to lay a gathering system to connect with all wells drilled in the Sabine river bed, and as production was extended farther north in Gregg, over in Upshur County on the north, and into Cherokee County on the southwest, lines had to be extended to gather oil from these new areas. When the gas area of southern Rusk was opened a gas line was laid by the Sinclair Prairie Oil Co. to pipe gas from some of the gas wells to leases to the north, the gas being used for drilling and production purposes.

The nine completed natural gasoline plants also called for considerable construction of gas gathering lines in Rusk and Gregg to obtain sufficient gas to operate the plants. The Humble Oil & Refining Co., erecting a plant at Kilgore and one at London, laid the largest gas gathering system, the Arkansas Fuel Oil Co. and Gulf Production Co. also laying a considerable network of gas lines to supply their plants, the former north of Camp Switch and the latter at Overton. The small daily per well allowable resulted in the necessity of larger gas gathering systems than would ordinarily be constructed in the field.

### Short Lines in West Texas

The old Harding Pool of Howard County, in West Texas, which has only two wells, was given its first pipe line outlet when the Big Spring Pipe Line Co. laid a small line into a refinery at Big Spring. The pool is located 10 miles northwest of the Howard-Glasscock production, and was discovered in May, 1927, by the old Marland Oil Co.

The Mentone Refining Co. erected a 1,500-bbl. skimming plant at Arno in Loving County and laid a 3-inch line to connect with the Wheat Pool in that county, thereby giving the pool its second pipe line outlet.

The McNutt Oil & Refining Co. is now erecting a 1,500-bbl. plant at El Paso which will operate on crude produced in southern Ward County. The Wickett Pipe Line Co. will run the oil from the pool to its loading rack on the T. & P. Railroad, where it will be shipped by tank car to El Paso.

The Trentex Refining Co. is building a 170-bbl. plant at Trent, Tex., to operate on crude produced in the Noodle Creek Pool, Jones County.

W. H. Stowell and associates erected a 200-bbl. skimming plant at Mertzon, in Irion County during the year, and this plant is now processing crude run to it from the shallow sweet oil pool southwest of that place. There are 11 shallow producers in the pool. The plant operates under the name of the Mertzon Refining Co.

With activities curtailed to a minimum in West Texas refining and pipe line construction will be nil in 1933. The only work now planned in the district is by the Cosden Oil Co., the receivers of which have voted to spend $300,000 on repairs and new construction on its plant at Big Spring.

### Southwest Texas Lines

Pipe Lines built during the year 1932 in Southwest Texas were for the most part rather short lines to take care of immediate needs of new pools, and the pools were so located that building of long lines was not necessary.

Rob Rose built 3 miles of 4-inch line from the Dunlap Field in Caldwell County to the Rob Rose refinery north of the city of Luling to take care of the production from the Dunlap Field.

Cardinal Pipe Line Corp. built 7 miles of 4-inch line from the new Jacob Pool, in northeastern McMullen County, to Whitsett, 7 miles east, where a loading rack was built on the Missouri Pacific Railroad.

Atlantic Pipe Line Co. built a 4-inch line 4 miles long from the Pettus Field to the Tuleta Pool in northern Bee County, Tuleta being a new pool.

South Texas Oil Co. built 3 miles of 4-inch line from the new Laurel Pool in Webb County to loading rack on the Missouri Pacific Railroad at Oilton.

A few miles of extension were built by the Magnolia to the North Government Wells Field in northern Duval County, and Humble Pipe Line Co. built a short line about 2 miles long, an extension from the South Government Wells line to the Sarnosa Pool.

Gulf Coast Pipe Line Co. built 7 miles of 4-inch line from the Saxet Field in Nueces County to a 55,000-bbl. tank on the docks at Corpus Christi.

Eight miles of 4-inch line was built from the Los Olmos Pool in Starr County, to the loading rack at Rio Grande City on the Missouri Pacific Railroad, by the Los Olmos Pipe Line Co.

The Humble Pipe Line Co. extended its gathering line in the Darst Creek Field about 1 mile to the southwest to take care of the production in the Camp extension to the field.

### Several Projects in Rocky Mountains

Oil pipe line construction in the Rocky Mountain Area was very limited in extent in 1932, but at the end of the year several projects were nearing the building stage. The Illinois Pipe Line Co. constructed a 4-mile 8-inch line from the Garland Dome, in Big Horn County, to a connection with its Elk Basin trunk line, erected a pumping station in the field and constructed 60,000 bbls. of storage. The purpose of the line was to move oil from that field, following the signing of a contract with the Ohio Oil Co. for the sale of 100,000 bbls. of crude to the Midwest Refining Co. to be run in the Greybull refinery.

The Illinois Pipe Line Co. did considerable replacement work on its 63-mile line from Elk Basin to Greybull. Most of the line from Cowley Junction to Greybull, a distance of 38 miles, was replaced with 8-inch pipe for the old 6-inch. A lateral, 3½ miles long, consisting of 8-inch pipe, was laid from Cowley to Garland. This company took up and abandoned its 45-mile 8-inch line laid in 1923 from Salt Creek to Casper. Loading racks were dismantled and pumping station previously had been removed. The company also dismantled its 22-mile 6-inch line from the Artesia Field to Dayton, in New Mexico. This followed the retirement last year of the Ohio Oil Co. as a purchaser of Artesia crude. Its line leased from the New Mexico Pipe Line Co., a part of the system, was returned to the owner.

A projected line, for which surveys have been made, is to be constructed from the Hospah Dome, McKinley County, New Mexico, to Prewitt Station, near Baca, on the Atchison, Topeka & Santa Fe Railroad by the Transport Refining Co. It will be approximately a 32-mile 4-inch line. The plans include the removal of a refinery from Lovell, Wyo., owned by the same interests, to Prewitt to operate on crude from the Hospah Field which these interests acquired from the Midwest Refining Co. Leslie Welch, C. C. Worland and James T. Hurst are identified with the project. The Ross Engineering Co. of Albuquerque surveyed the line and the Kelly Pipe Line Co. has the contract to lay it. Los Angeles capital is reported back of the project.

The Bolton Oil Co.'s 32-mile 6-inch line from the Bolton Creek Field to Casper, Wyo., was emptied during the year.

The Santa Rita Oil & Gas Co. has completed preliminary surveys and acquired the right of way for a 4-inch line 8 miles long from the Cut Bank Field, Glacier County, Montana, to Baltic, 3 miles east of Cut Bank, on the Great Northern Railroad. Construction of loading racks is to begin at once. The line will move oil from that company's wells to railhead.

### Short Lines in Oklahoma

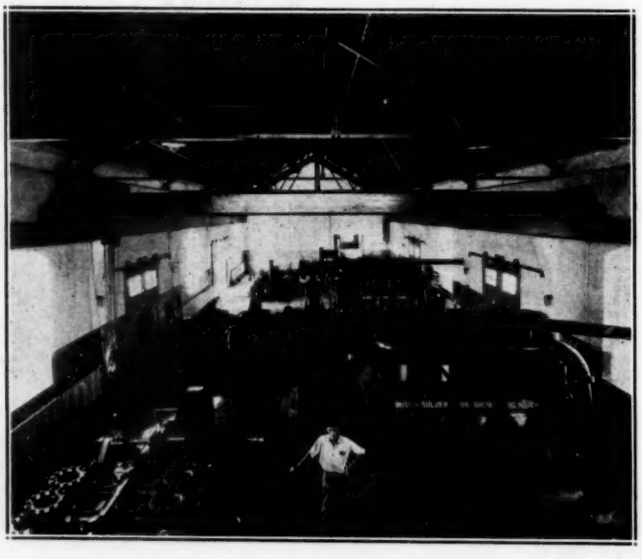
The first pipe line built into the Oklahoma City Field during the year 1932 was the Phillips Petroleum Co.'s extension of its system from the Earlsboro area. This line was started in March and completed in April. It is 42 miles long, a 6-inch welded line from the company's pipe line station on its Knappenberger lease, 1 mile east of the townsite of Earlsboro in Section 8-9-5, Pottawatomie County, to its station in the Oklahoma City Field.

This line was constructed to connect with the company's system that ran from its Knappenberger lease to Okmulgee refinery. It permitted the company to handle a part of its own production in the Oklahoma City Field and ship it direct to the refinery. The rate capacity of the line was placed at 6,000 bbls. a day at the start, but was increased to approximately 18,000 bbls. daily by the installation of additional pumping units.

In December the Gulf Pipe Line Co. was preparing to start construction work on a new line from the State Line Pool, located in Sumner County, Kansas, and Grant County, Oklahoma, to its main line near the Braman Pool, in Kay Coun-

(Continued on Page 73)

## A Diesel Engine Station on an Oil Trunk Pipe Line



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# Natural Gas Pipe Line Construction in 1932 Was at Low Ebb With Only Short Lines Built

A pronounced decline in natural gas pipe line construction occurred in the United States in 1932. The great gas fields of Louisiana, Texas and western Kansas which were provided with outlets stretching hundreds of miles easterly and northerly in previous years made and end to pipe line building on a large scale, and the past year saw only shorter and smaller lines built from the various gas producing states.

### Rocky Mountain Construction Work

A limited number of small units of natural gas pipe lines were constructed in the Rocky Mountain area in 1932. The Southern Union Gas Co. completed and put in operation on November 15, 1932, a 24-mile welded gas line from a connection with its main line near Farmington to three gas wells in the Ute Pasture district near the Colorado line. The wells connected up were drilled more than 10 years ago by the Producers & Refiners Corp. and the Midwest Refining Co. and were shut in until about two years ago when arrangements were made for marketing the gas through the Southern Union company and another company which at that time completed a line into Durango, Colo. The Southern Union company has been supplying Albuquerque and Santa Fe from wells in the Bloomfield-Kutz Canon district in San Juan County. These wells have an open flow capacity around 7,000,000 feet per day. When litigation threatened to hinder the development of that district, it was decided to build the connection with the Ute Pasture wells. O. J. Frizzell, of Dallas, Tex., had the contract. The Ute Pasture wells are in Section 1-31-14 and 36-32-14. Their initial open flow capacity was better than 125,000,000 feet per day.

At the end of 1932 The Texas Company had completed surveys and was calling for bids for hauling and distributing pipe for a gas line from the Hobbs Pool to the Lea Pool. Construction work is expected to start early this year. The line will be approximately 25 miles long. The oil wells in the Lea Pool are produced by pumping and The Texas Company is the principal operator. It is planned to install gas lifts in the field for the more economical producing of the well.

The only construction reported in Colorado was a line built by the Rocky Mountain Gas Co., a subsidiary of the Ohio Oil Co., from No. 1 Bogenschultz, a gas well on the Craig Dome, in Moffat County, to the town of Craig. This line is 3.5 miles long and consists of 3 and 4-inch pipe. The company also has the franchise at Craig and constructed a complete distributing system. It was finished and placed in operation during the year.

### To Kansas-Colorado Towns

Early in the year a deal was concluded whereby the United Companies, of Abilene, Kans., acquired the Colorado Gas & Utilities Co. The last named concern supplied 12 cities and towns in southwestern Kansas and southeastern Colorado, including Holly, Lamar, Wiley, Granada, Springfield and other towns. The system, which pipes gas from the Hugoton Field, comprises 250 miles of pipe line, including 91 miles of main transmission line.

In 1930 the Fulton Petroleum Co. was granted franchises to supply Fruita, Grand Junction and other towns in western Colorado with gas from the Garmesa Dome, in Garfield County. In anticipation of this development the company drilled a well which had an initial open flow of 30,000,000 feet per day. Construction of the line, which will be about 26 miles from Grand Junction to the field, was opposed by other companies and construction was delayed. In June, 1932, the voters of Grand Junction granted the company a two-year extension of time in which to construct the project.

A small unit was constructed in Natrona County, Wyoming, from the Weyland well, Section 30-37-86, to the town of Arminto, a distance of 3 miles. The town was piped and is now supplied with gas. It consisted of 2-inch pipe. A. J. Carlson and D. C. McClellan laid the line.

### Line to Laramie Projected

A project which is expected to get under way at an early date will be the piping of natural gas from the Dutton Creek Field, in Carbon County, Wyoming, to Laramie, Wyo. S. H. Keoughan and associates, operating as the Mutual Oil Syndicate, acquired the holdings of the Midwest Refining Co. at Dutton Creek last summer. These included two oil wells which also were producing gas from the Shannon sand at 1,800 feet. The Mutual syndicate drilled three additional wells and the Ohio Oil Co. completed one. A reserve of 5,000,000 feet per day was developed and a much larger reserve proven. The Laramie Gas Co., the local utility at Laramie, was granted a 25-year natural gas franchise. The Illinois Pipe Line Co. owns a 36-mile 6-inch oil carrier from the Rock River Field to Laramie and a 4¾-mile 3-inch line from Dutton Creek to a connection. It is proposed to convert this into a gas line, as it is no longer running oil, construct a connection from the field to the Rock River terminal and another from the old Standard refinery near Laramie with the city mains. The distributing system will be converted for the use of natural gas. The total cost will be in the neighborhood of $750,000. Laramie, in lieu of taxes, will accept 1,800,000 feet of gas per year for heating municipal buildings.

The Lakota Oil & Gas Co., which has some gas developed on the North Casper Creek structure 25 miles northwest of Casper, proposed to supply this to Casper for domestic uses. Casper at present is supplied by the New York Oil Co. It was proposed that the city buy the New York Oil Co.'s distributing system under the terms of the franchise and operate it as a municipal system, buying gas from North Casper Creek. The matter is still pending between the various interests and no date has been set for construction if it is to be undertaken.

C. E. Bivens and associates, who drilled a gas well on the Baggs Dome in Carbon County, in Section 35-13-92, had a certificate from the Wyoming Public Utilities Commission giving permission to build a line from that field to supply Baggs, Saratoga, Rock River, Bosler, Laramie and continue to Cheyenne. After being extended once or twice, it was canceled on December 12, due to failure to show adequacy of supply.

No construction of importance took place in Montana during the year.

### Mid-Continent Gas Lines

The Leflore County Gas & Electric Co. of Poteau, Okla., completed a 16-mile gas pipe line connecting the Red Oak gas field with its other pipe lines at a point near the generating plant of the Lincoln Power Co. on the edge of Heavener, Okla.

The construction of this line was necessary to carry the winter load of all the company's customers, while it serves no new customers, it made it possible for the company to handle additional loads taken on during last summer. The Red Oak gas field is located in the northeastern part of Latimer County.

The Panhandle Eastern Pipe Line Co. completed 25 miles of 10-inch gas pipe line from Hannibal, Mo., to serve Quincy, Ill. The pipe line will be west of Hannibal, and will extend directly north to the Mississippi River near the south edge of Marion County, where two other 8-inch pipe lines will be placed on the bed of the Mississippi River, which is approximately 3,300 feet wide at this point.

This gas line will run near Marblehead, Ill., and from that point will be under the direction of the Panhandle Illinois Pipe Line Co., to Quincy and will then connect with the lines of the Central Illinois Public Service Co., which are now serving manufactured gas.

The Natural Gas Pipe Line Co. surveyed a 50-mile extension gas pipe line from Oskaloosa, Ia., to Newton, Grinnell and Marshalltown. This 50-mile gas pipe line would leave the main line near Oskaloosa, and would extend northwest to Marshalltown, where it would serve the distribution system of the Iowa Railway and Light Corp. The same line would serve Newton and Grinnell.

A 3-inch gas pipe line was completed into the Hollow Field in Harvey County, Kansas, by the Kansas Pipe Line Co. The line started in the northwestern part of Reno County, in Haury Pool. The gas line will be used to supply fuel to the drilling wells in the Hollow Field.

### Lines Laid in California

The only pipe line construction undertaken in California during 1932 was the laying of a 12¾-inch high pressure gas transmission line from Huntington Beach to Rose Canyon in the city of San Diego, a distance of approximately 80 miles. Only a part of this line was constructed in 1932, however, as the initial 35 miles of line extending southward from Huntington Beach to the Orange County line southeast of San Clemente was installed by the Southern Counties Gas Co. in 1929. The actual amount of new gas transmission line laid in this link during 1932 was 45 miles of new line from San Clemente to San Diego. Of the 45 miles of new line laid, 16 miles are protected with a coating of hot asphalt double wrapped with rag felt, while 29 miles are protected with coal tar and wrapped with asbestos pipe wrapper.

The only other pipe line work undertaken in California during the past year was the reconditioning of the Southern California Gas Co.'s 12¾-inch natural gas transmission line extending from the Buena Vista Hills in the Midway-Sunset Field to Los Angeles. This line was laid approximately 20 years ago and while it has received the usual amount of care, a survey indicated that it would be necessary to rebuild it in order to continue the line in active satisfactory service. The entire line was rebuilt and all corroded or weakened pipe was replaced with new pipe. This line was coupled with couplings but during the reconstruction work all joints were arc-welded. After being assembled and just previous to burial, the line was coated and treated in the usual customary manner. With the exception of replacing three or four short crude oil lines in the Long Beach Channel due to salt water corrosion, no other pipe construction work was undertaken in California during the past year. The outlook, at least for the immediate present, does not appear any too promising for new construction, although several short lines may be constructed during 1933 if the existing curtailment program continues in effect throughout the period in question. If curtailment work proceeds satisfactorily, operators in the Santa Barbara Mesa may be afforded an outlet by the construction of a short crude oil line to Elwood and the Gato Ridge Field afforded similar facilities.

### Western Canada

In the Canadian fields in 1932 the construction of natural gas lines reached one of the lowest points in the history of the industry. In Alberta practically the only new construction of importance was the duplication by Northwestern Utilities, Ltd., of Edmonton of a short portion of its main transmission line from the Viking Field. The line had already been duplicated for about 29½ miles from the field to Ryley; and the duplicate line was extended a further 2

## Reciprocating Pumps in an Oil Trunk Pipe Line Station

miles last year at a cost of approximately $29,000. Improvements were made to the Edmonton distributing system, includ- the laying of some additional intermediate pressure line.

In southern Alberta, Canadian Western Natural Gas, Light, Heat & Power Co. relaid several miles of its original main transmission line north of Lethbridge; while some improvements were made to its distribution in Calgary, Lethbridge and other communities. The Wainwright Gas Co. added 2,200 feet to its distributing system.

The Canadian Western Natural Gas Co. also secured a franchise under which it took over, and will improve, the distribution in the town of Bow Island, linking the system with its main transmission line. One object of this move was to facilitate the repressuring of the Bow Island Field, which was affected by the defective condition of the community well supplying the old Bow Island municipal system. Repressuring of the Bow Island Field continued in 1932, upwards of 3,000,000,000 feet of gas from Turner Valley having been stored.

The town of Peace River granted a franchise to A. W. Belcher and associates of Lethbridge, Alberta, while the Vegreville Utilities, Ltd., took over a franchise for Vegreville; but in neither place was the laying of pipe undertaken in 1932.

### Eastern Canada

In eastern Canada, pipe line activity was even less. The major gas companies restricted their activities to maintenance and no new lines of any importance were laid.

## Oil Pipe Line Construction Was Principally Short Lines

(Continued from Page 70)

ty. This pipe line is of 6-inch pipe and covers a distance of 18 miles.

The line starts in Section 16-35-4w, Sumner County, Kansas, and runs in a southeasterly direction to a point in Section 12-28-3w, Grant County, Okla., and then due east to the company's main line in Section 8-28-1w, Kay County, Oklahoma. The construction work on this line is expected to be completed about February 10.

In December the Stanolind Pipe Line Co. started construction work on 11 miles of 6-inch pipe line from Billings in northwestern Noble County to its main line near Tonkawa, in southwestern Kay County.

### New Construction in Kansas

In July, 1932, the Skelly Oil Co. started construction work on a 4-inch pipe line from the Voshell Pool in McPherson County, Kansas, to the Hollow Pool, in Harvey County. This line was about 6 miles long and extended the company's facilities to include the handling of oil from its own wells in the Hollow Field.

The Dickey Oil Co. completed about 6 miles of 4-inch line connecting its own properties in the Ritz-Canton-Decker Field with the company's refinery in McPherson.

In January, 1932, the Stanolind Pipe Line Co. started extending its pipe line facilities to some of the areas in the central western part of Kansas, along the Barton-Ellsworth Arch, thereby providing an outlet for the oil from wells that have been shut in for some time. The Stanolind Pipe Line Co. extended its pipe line from the Schurr Pool, near Raymond, in Rice County to the Sharpe area in the same county. This was a 4-inch line about 5 miles long, from Section 21-20-10w to Section 30-20-10w. Another 4-inch line was constructed to the Isern area in Barton County from the Schurr Pool. The Isern area is located in Section 12-20-11w.

The Stanolind Pipe Line Co. installed a number of loading racks in the central western part of the State and laid 2-inch gathering lines to the racks. The crude oil was shipped out in tank cars.

The White Eagle Oil Corp. completed about 27 miles of 8-inch pipe line from its Kemper station in Section 34-25-4, in Butler County, to the west, to connect with its pipe line at Valley Center in Section 31-25-1, Sedgwick County.

The Shell Petroleum Corp. completed a line of about 3 miles in length from its pump station 3 miles north of J. E. Mabee's No. 1 well in Section 33-21-3w. This pipe line was an extension of its facilities in that part of the State.

### A Remarkable Line in Mexico

Oil began flowing through the 300-mile pipe line in February, 1932, which connects Mexico City, Mexico, with the sea level petroleum sources, at Palma Sola, State of Vera Cruz. The pipe line is a 10-inch welded oil pipe line and is owned by the Compania Mexicana de Petroleo "El Aguila" S. A.

The 10-inch pipe line extends from Palma Sola through the States of Vera Cruz, Puebla, Hidalgo and Mexico, terminating at "El Aguila" company's plant located at Atzcapotzalco, a suburb of Mexico City.

The pipe line is called the highest in the world. It passes over mountains more than 9,000 feet in altitude. Mexico City is 7,400 feet above sea level.

The line has a capacity of 1,200 to 1,500 meters of petroleum daily. It was under construction since October, 1930. The line was constructed of 41-pound standard screw-end line pipe, which was put through the shops of the contractors at Tampico, where it was thoroughly inspected and both ends cut off. The pipe was then beveled to 45 degrees, using 10-inch cutting machines. It was then hauled to the location in railway cars and trucks.

The contractors encountered the most difficult pipe line problems through a large part of the right of way. The line crossed a mountain river (Cazones River) five times and due to the heavy rains in the mountains during the entire year of 1931, the river was in continuous flood stage, making it necessary to use cable ways in order to cross supplies, material and other small equipment. To transport equipment over part of the right of way it was necessary for the contractors to re-corduroy a large part of the district. The original timbers would sink into the ground, which was soft, wet soil, and the tractors could not pull the loads. It also became necessary to pack on mule a large part of the equipment.

There were seven pump stations built along the line. The average distance between the stations was 8.86 miles.

A telegraph and cable system was constructed along the pipe line. The estimated total cost of this pipe line was 2,100,000 pesos. All the ditching was done by hand labor. The number of men employed on the construction of the line was 3 engineers, 7 superintendents and 1,200 laborers. All of the labor work was done by Mexicans.

### Pipe Line in Iraq

The world's largest pipe line project of the year was the starting of the work on the transportation system to carry oil from the oil fields at Kirkuk, Iraq, in Asia Minor, and delivered to the ports of El Mina, 1½ miles from Tripoli, Syria and Bay of Acre near the town of Haifa, in Palestine.

This line will be double and will require 1,180 miles of pipe having a total weight of approximately 120,000 tons. The pipe is being furnished by British, French, American and German manufacturers.

There will be 12 pumping stations, the first three of which will be equipped with duplicate plants for the double line. The others will have single pumping sets.

It has been estimated that the annual throughput of the double line will be about 28,000,000 bbls. of crude oil and the pumps will work at a pressure of 500 pounds per square inch.

The construction work was started November 1 and according to the schedule prepared it is expected that the system will be completed by June, 1934, which is six months in advance of the "deadline" date specified in the agreement between the company and the government of Iraq.

Because of the arid condition of the country through which this pipe line passes it will be necessary to develop water supplies at favorable points along the right of way and also to lay a number of 3 and 4-inch water lines between source of supply and the stations.

Pipe for the river crossings was shipped to Iraq and Syria early last fall from the United States and consisted of about 8,000 tons of 10¾-inch pipe. All of the 12-inch pipe is to be furnished from manufacturers in France, England and Germany, while the balance of the 10¾-inch pipe will come from England and Germany.

Equipment for construction of the line has been ordered in the United States as the methods followed in laying the line will be those developed in this country on the various major transportation systems. The personnel of the pipe line construction company is largely made up of Americans headed by H. S. Austin, president of the Ajax Pipe Line Co. About 100 American engineers and workmen are on the job and the organization has been perfected and work is being pushed with all speed.

## Completed Wells in 1932 Surpassed 1931 Record

(Continued from Page 61)

Rusk County, and which has spread to Gregg, Upshur, Smith and Cherokee Counties, with a total productive acreage variously estimated at 114,000 acres upwards, was the most active field in the United States notwithstanding the fact that as wells were completed and potential production increased the average production per well was lowered, starting at 100 bbls. per day per well on January 1 and ending the year with an allowable of 37 bbls. per day per well. This and the constant danger of very low prices did not deter any one with a lease from drilling. A total of 5,760 wells was completed in East Texas as against 3,396 the year before. Gregg led with 3,162 completions, Rusk County following with 1,856 completions. Troops were kept in the field all the year until December 21 when the last of them were sent home. At one time 1,200 soldiers were scattered over the big area trying to maintain law and order in the production of oil. The end of the year saw a slowing up of field operations, as over 9,000 wells had been completed since the opening of the field in 1930, and the acreage was pretty well occupied. No new pools were opened in the outlying districts and 118 dry holes were drilled in an effort to extend production or uncover new pools.

In East Central Texas, outside of the 80 wells drilled in Van Zandt County, of which 61 were oil wells in the Van Field, the scattered drilling in 25 counties resulted only in dry holes.

### Busy Year in Southwest Texas

It was a very busy year in Southwest Texas, with drilling operations increased 44 per cent over 1931 and initial production increasing 87 per cent over the previous year's showing. Many discoveries were made, some of them significant. The most important of the new fields were in Duval County in the Government Wells group, the Laurel Pool in Webb County, the Rio Grande City Pool in Starr County, and the Tuleta Pool in Bee County. Duval, Zapata and Starr Counties held the center of interest throughout the year. An even hundred wells were completed in the Los Olmos district, 110 in the Government Wells area, and 92 in Escobas, which three were the most active areas in the division.

### Pool Extensions and Deep Drilling

The most important work in the North Texas, Central Texas and West Texas areas was in the extension of pools, particularly in the eastern part of this big territory. Archer, Young and Foard Counties and the Howard-Glasscock area were included in this work. Pools were opened in Ward County and Ector County. The Texas Panhandle was less active than in 1931 and no important new production was developed. Many wells were deepened in an effort to develop new production. Much of this work was done on wells no longer commercially productive and where these were failures in the deeper levels they were plugd and abandond. Some good results resulted from this deeper drilling.

### New Arkansas Field

A new pool was opened in Miller County, the most southwesterly of Arkansas counties, in 1932. Roy Baker and others in Section 33-15-26 completed a 350-bbl. well at a depth of 2,926 feet, after Fitzwater and others had completed a small well in the same section producing heavy gravity oil two months earlier. The well of Baker and others drew general attention to the area.

In North Louisiana there were more completed wells drilled than in the previous year and they opened two prospective pools. Sabine Parish was credited with 251 completions. The new prospects are Spring Ridge in northern Sabine Parish and the Converse area in western Sabine Parish.

### Quiet in the Rockies

New Mexico was the only state in the Rocky Mountain group that showed an increase in drilling operations last year over 1931. No important discoveries were made in Montana, Wyoming, Colorado or New Mexico, but there was a flurry of excitement caused by a test in Weld County, Colorado, which found good showing of oil and gas but which drilled into water.

### California Cut Field Work

California had such a large potential production all the year and the industrial conditions were so unsatisfactory that drilling operations in the Pacific Coastal fields were cut down in 1932. A total of 356 new oil wells were completed as against 484 the previous year. No new fields were discovered. Deeper drilling opened important production in North Belridge, San Miguelito and Ventura Avenue Fields. The Belridge discovery resulted in an initial production of 2,050 bbls. of 50.5 gravity oil at 70,000,000 feet of gas at 8,062 feet in depth, and the deep producing zone is believed to underlie a large area. The Associated Oil Co. established a new deep hole record for a producing well in its No. 83 Lloyd in the Ventura Avenue Field which flowed 5,245 bbls. of 31.7 gravity oil and 4,100,000 feet of gas from a total depth of 9,700 feet. The deepest dry hole record for the United States was also shattered in 1932 when the Western Gulf Oil Co. completed a wildcat in the Santa Maria district at a depth of 10,294 feet.

### Michigan's Good Field

Michigan saw the most important development work of any of the fields east of the Mississippi River. In the Mount Pleasant Field in Central Michigan 143 wells were completed, 135 of which were in Midland and 18 in Isabella County. Test work resulted in dry holes in a dozen scattered counties. The Muskegon Field was very quiet.

Kentucky surpassed its 1931 record by completing 495 wells as against 424 the year before.

The most interesting work in Pennsylvania was the development of the latest Oriskany sand gas field in Hebron Township, Potter County, but gas development slowed up considerably in the New York-Pennsylvania gas field until the natural gas market warrants more extensive operations.

### COMPANY MOVES TO DENVER

DENVER, Colo., Jan. 23.—Control of the Platte Valley Petroleum Co. passed back to the officers and directors who were in charge when the company brought in the discovery well in the Greasewood district in 1930, at the annual meeting last week. The officers and directors now are Francis J. Kirchoff, president; Carl F. Stahl, vice president; Walter E. Schwed, secretary and treasurer; and Louis Anderson and E. H. Sabra additional directors. Headquarters have been moved from Fort Morgan to Denver.

# Conroe Pool Was Most Important of Many Pools Opened Last Year in the Gulf Coast Area

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

The Gulf Coast closed the year 1932 as the most active and most watched district in the country. The stimulus which was given by the development of Conroe and the discovery of a dozen other new fields led to an influx of companies and operators from all parts of the country which resulted in an exploration and development play as great as any ever before witnessed on the coast. The activity had its origin on the Texas side of the coastal division, but proration restrictions and other limitations there now has centered interest also over onto the Louisiana side which now is being worked and leased intensively with geophysical instruments and the discovery of a number of possible new salt domes has been reported.

The most outstanding development of the year was Conroe, located in Montgomery County, which is just north of the generally accepted Gulf Coast salt dome country. At the opening of the year there was just one wet gas well, G. W. Strake's No. 1 South Texas Development Co., Theodore Slade Survey, about 3½ miles southeast of the town of Conroe, but at the end of December there were more than 100 producing oil wells.

The development is all the more important in view of the fact that little attention from a drilling standpoint was given the field until after the bringing in of the first oil well in the latter part of June, with the most intensive drilling being since September. Until the discovery of the first oil well in June, only two wells had been drilled and both were wet gassers. Both since, however, have been deepened and have been completed as oil producers in the lower horizon.

Previous to the bringing in of the first oil well in June, interest was directed to the area when Humble Oil & Refining Co. in March made a deal with Strake Oil Corp. for 4,368 acres of the South Texas Development Co. property, which comprised slightly more than half of G. W. Strake's original block in the district. The transaction for an exploration program resulted in the bringing in of the discovery oil producer and really started the leasing and royalty buying activity.

### Field of Real Importance

The field since then has developed into major proportions and is an important factor in the State's oil picture. Proven production now covers an area of approximately 15,000 acres with more than 100 operations, including actual drilling tests, rigs and active locations. While limits seem to have been defined along the north by several salt water wells and dry holes and on the extreme southeast by a couple of deep dry holes, there so far are no limitations in a southwestern direction nor to the east. Late in December, Alpha Oil Co. made a 2-mile southwestward extension in its No. 2 Keystone Mills in the Lemuel Smith Survey, which started a drilling development between that well and the main production. Previously Gulf Coast Drilling & Production Co. had made a 3½-mile extension to the southeast, while South Gulf Oil Corp. made a surprise well in a test over a mile east of the original eastward line of the northwest-southeast trend. The extension made the field approximately 6 miles long by about 4 miles wide.

When it originally was thought that the field would be less than 3,000 acres, Humble Oil & Refining Co. had acquired the bulk of what then was considered the potential acreage which lessened the interest in the area so far as a boom play was considered. However, since then the field has spread to such an extent that the play has become diversified and at close of the year there were more than a dozen active operators, many of whom were drawn to the field from other areas outside the Gulf Coast.

### Tide Water Enters Conroe

The largest "outside" entrant at Conroe has been Tide Water Oil Co., which in November acquired an undivided interest in G. W. Strake's 665-acre Lewis tract in the C. B. Stewart Survey and the holdings of Heep Oil Corp., including that company's own property and its interest in properties held jointly with Houston Oil Co. Those two transactions gave the Tide Water a tie-in with more than 2,000 acres of proven territory with some production already developed, firmly entrenching that company on the Gulf Coast and causing it to establish its division headquarters for Texas, New Mexica, Arkansas and Louisian at Houston. The company immediately became a purchaser of Conroe crude and laid a complete gathering system. For the present the oil is being moved to tidewater through a line of the Texas Pipe Line Co. system. Tide Water since then has acquired additional acreage in the field, which it now is developing.

Numbering among the larger operators active in the field are Humble Oil & Refining Co., The Texas Company, Tide Water Oil Co., Standard Oil Co. of Kansas, Houston Oil Co., Skelly Oil Co., Gulf Drilling & Production Co., Alpha Oil Co., Sun Oil Co., Navarro Oil Co. and others.

### Humble Provides Pipe Line

Soon after the discovery of the first actual oil production in June, Humble Pipe Line Co. laid the first pipe line outlet, 28 miles of 8-inch line from the field to Satsuma, a station on its North Texas-Gulf Coast main system. Later the Texas Pipe Line Co. put in an 8-inch line, a distance of approximately 14 miles to a point near Spring, on its main line. No

## Gulf Coast
### SOUTH TEXAS AND SOUTH LOUISIANA

## Texas
**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALLEN: | | | | | | | | | | | | | |
| Daily average | 15 | 15 | 12 | 13 | 13 | 16 | 12 | 12 | 2 | 15 | 12 | 13 | |
| Month | 467 | 438 | 373 | 392 | 406 | 480 | 375 | 375 | 63 | 475 | 364 | 405 | 4,613 |
| ARIOLA: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 107 | 58 | 66 | 39 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3,215 | 1,794 | 1,982 | 1,211 | 8,202 |
| BARBERS HILL: | | | | | | | | | | | | | |
| Daily average | 20,324 | 17,797 | 18,245 | 19,141 | 20,571 | 20,711 | 20,652 | 20,343 | 21,565 | 23,161 | 20,076 | 19,370 | |
| Month | 630,042 | 516,113 | 565,599 | 574,227 | 637,704 | 621,322 | 640,216 | 630,638 | 646,958 | 717,997 | 602,289 | 600,467 | 7,383,572 |
| BATSON: | | | | | | | | | | | | | |
| Daily average | 860 | 819 | 806 | 778 | 842 | 844 | 837 | 829 | 812 | 762 | 606 | 718 | |
| Month | 26,665 | 23,754 | 24,981 | 23,338 | 26,101 | 25,306 | 25,942 | 25,695 | 24,356 | 23,628 | 18,179 | 22,254 | 290,199 |
| BIG CREEK: | | | | | | | | | | | | | |
| Daily average | 1,224 | 1,281 | 1,223 | 1,144 | 1,091 | 1,096 | 1,025 | 971 | 1,247 | 1,278 | 1,172 | 1,135 | |
| Month | 37,947 | 37,150 | 37,915 | 34,324 | 33,827 | 32,888 | 31,770 | 30,108 | 37,403 | 39,612 | 35,157 | 35,186 | 423,287 |
| BLUE RIDGE: | | | | | | | | | | | | | |
| Daily average | 965 | 918 | 1,271 | 973 | 988 | 1,005 | 1,005 | 885 | 783 | 921 | 938 | 896 | |
| Month | 29,911 | 26,620 | 39,404 | 29,191 | 30,628 | 30,163 | 31,158 | 27,430 | 23,493 | 28,556 | 28,141 | 27,777 | 352,472 |
| BRENHAM: | | | | | | | | | | | | | |
| Daily average | 33 | 25 | 27 | 25 | 22 | 33 | 25 | 25 | 25 | 39 | 46 | 48 | |
| Month | 1,020 | 720 | 833 | 754 | 685 | 985 | 775 | 777 | 755 | 1,207 | 1,372 | 1,481 | 11,564 |
| BOLING: | | | | | | | | | | | | | |
| Daily average | 607 | 639 | 629 | 695 | 632 | 621 | 525 | 376 | 405 | 429 | 403 | 429 | |
| Month | 18,814 | 18,537 | 19,498 | 20,846 | 19,593 | 18,636 | 16,277 | 11,652 | 12,145 | 13,293 | 12,092 | 13,293 | 194,676 |
| BUCKEYE: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 280 | 1,203 | 1,214 | 830 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8,402 | 37,299 | 36,416 | 25,737 | 107,854 |
| CLAY CREEK: | | | | | | | | | | | | | |
| Daily average | 518 | 507 | 757 | 1,039 | 1,138 | 1,217 | 1,152 | 1,158 | 1,177 | 1,148 | 1,135 | 971 | |
| Month | 16,052 | 14,707 | 23,465 | 31,172 | 35,279 | 36,519 | 35,715 | 35,894 | 35,306 | 35,586 | 34,044 | 30,104 | 363,844 |
| CONROE: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | 82 | 130 | 119 | 304 | 435 | 5,569 | 13,645 | 13,561 | 23,498 | 24,503 | |
| Month | ..... | ..... | 2,546 | 3,901 | 3,682 | 9,111 | 13,480 | 172,633 | 409,357 | 420,396 | 704,942 | 759,597 | 2,499,645 |
| DAMON MOUND: | | | | | | | | | | | | | |
| Daily average | 1,055 | 995 | 1,111 | 882 | 445 | 548 | 593 | 562 | 199 | 533 | 547 | 578 | |
| Month | 32,709 | 28,940 | 34,448 | 26,455 | 13,796 | 16,446 | 18,386 | 17,428 | 5,962 | 16,527 | 16,417 | 17,913 | 245,427 |
| ESPERSON: | | | | | | | | | | | | | |
| Daily average | 1,419 | 1,309 | 1,421 | 1,411 | 1,328 | 1,453 | 1,393 | 1,652 | 1,671 | 1,468 | 1,290 | 1,249 | |
| Month | 43,985 | 37,964 | 44,051 | 42,330 | 41,167 | 43,598 | 43,189 | 51,215 | 50,127 | 45,504 | 38,703 | 38,717 | 520,550 |
| FANNETT: | | | | | | | | | | | | | |
| Daily average | 389 | 418 | 403 | 400 | 378 | 410 | 401 | 490 | 505 | 394 | 322 | 311 | |
| Month | 12,056 | 12,125 | 12,491 | 11,992 | 11,714 | 12,295 | 12,435 | 15,190 | 15,153 | 12,218 | 9,655 | 9,639 | 146,963 |
| GOOSE CREEK: | | | | | | | | | | | | | |
| Daily average | 3,619 | 3,487 | 3,466 | 3,453 | 3,591 | 3,693 | 3,512 | 3,377 | 3,747 | 3,702 | 3,575 | 3,446 | |
| Month | 112,183 | 101,120 | 107,444 | 103,596 | 111,325 | 110,790 | 108,900 | 104,683 | 112,400 | 114,760 | 107,246 | 106,828 | 1,301,275 |
| HANKAMER: | | | | | | | | | | | | | |
| Daily average | 1,700 | 2,008 | 1,966 | 1,760 | 2,176 | 1,839 | 1,713 | 1,769 | 1,637 | 1,725 | 1,806 | 1,753 | |
| Month | 52,700 | 58,237 | 60,943 | 52,795 | 67,459 | 55,174 | 53,103 | 54,839 | 49,112 | 53,475 | 54,175 | 54,349 | 666,361 |
| HIGH ISLAND: | | | | | | | | | | | | | |
| Daily average | 1,380 | 1,495 | 2,022 | 2,478 | 4,227 | 4,538 | 5,062 | 6,023 | 6,198 | 5,458 | 5,241 | 5,312 | |
| Month | 42,785 | 43,351 | 62,685 | 74,335 | 131,033 | 136,125 | 156,921 | 186,710 | 185,946 | 169,194 | 157,233 | 164,673 | 1,510,991 |
| HULL: | | | | | | | | | | | | | |
| Daily average | 4,808 | 4,691 | 4,994 | 4,229 | 4,972 | 5,430 | 5,121 | 5,109 | 6,005 | 5,340 | 5,390 | 4,737 | |
| Month | 149,046 | 136,035 | 154,817 | 126,871 | 154,136 | 162,896 | 158,755 | 158,375 | 180,145 | 165,545 | 161,706 | 146,842 | 1,855,169 |
| HUMBLE: | | | | | | | | | | | | | |
| Daily average | 5,762 | 5,714 | 5,725 | 6,317 | 6,537 | 6,439 | 6,496 | 6,200 | 5,951 | 6,062 | 6,256 | 5,909 | |
| Month | 178,629 | 165,709 | 177,471 | 189,511 | 202,644 | 193,181 | 201,374 | 192,206 | 178,526 | 187,926 | 187,682 | 183,184 | 2,238,043 |

(Continued on Next Page)

other companies so far have laid connections, although several others have main lines through the district or reasonably close.

### Put on Proration

Since the active development the field has figured in the statewide proration picture and during December was under an allowable of 20,000 bbls., although this was cut January 1 to 18,500 bbls. Although certain properties are and have been producing above the allowable under protection of injunction suits, the production of the field has been held to approximately its limitations. For one week, however, during December many of the wells were opened and on one-day production reached a figure of 64,100 bbls. Estimates have given the field a potential recovery of above 400,000,000 bbls. with a yield of more than 30,000 bbls. per acre.

The fact that field is producing from a deep horizon between 5,100 and 5,300 feet has not seemed to have held back drilling. Formations are comparatively soft and holes now are being put down to the sand within two to three weeks. The producing horizon, including the gas zone and the lower oil sands, is approximately 300 feet in thickness, being in the basal Jackson and upper Yequa. Opinion still differs on the structural characteristics of Conroe, although many geologists believe it to be a deeply seated salt mass.

### The Conroe Trend

The Conroe Field aroused particular interest in what now is known as the "Conroe" trend, which is a strip of country following along the Reynosa-Lagarto contact or Hockley shoreline and through that tier of counties just north of the salt dome area. Along this trend there has been an extremely active leasing and royalty campaign, extending not only in Texas but also through Louisiana and into Mississippi. Geophysical crews have been working actively through much of this and numerous wildcats have been drilled on the Texas portion within the last several months although a long string of deep dry holes has been the result.

However, out of development along this "trend" has come the opening of at least three new Jackson and Yequa fields the past year, including the Schwabb district in the Sunshine area of southern Polk County, the Spurger area in eastern Tyler County, both of these eastward along the trend from Conroe, and the Coyle Concord block in southern Colorado County, westward from Conroe. So far only one gas well in each has been completed although each has the earmark of an important field.

### Schwabb District Attractive

The Schwabb district offers the most from a development standpoint although the bulk of the acreage immediately surrounding the discovery well is in large blocks. The Schwabb Field, as it is generally designated at present, was opened by Dick Schwabb's No. 1 Carlton-Davis, located in the A. Viesca Survey, which came in in October estimated as good for 50,000,000 feet of gas from sand at a total depth of 4,311 feet. The well was drilled on a 700-acre lease almost surrounded by acreage of Shell Petroleum Corp., which took the acreage to assist in the test. Since completion it has been standing shut in except for fuel, with a pressure of 1,475 pounds. Shell Petroleum Corp. immediately took an option on the Schwabb well and acreage and put up $25,000 cash for the drilling of a second test to be located on Shell acreage and to be drilled deeper into the pay with a view to uncovering oil production. The second well was drilled, it being Dick Schwabb's No. 2 Davis-Holmes. It was located approximately 1,050 feet west and a little south of the discovery well, and went to a total depth of 4,438 feet where it encountered sand showing oil and gas but so far has not made a successful completion due to salt water difficulties. The hole has been plugged back several different times with present bottom at 4,341 feet, from where a new hole will be sidetracked back to the sand. This well, however, ran a little lower than the discovery well.

A third test also has been started, this being Abercrombie & Harrison's No. 1 Carter, located southeastward from the Shell and Schwabb block and on a block of approximately 9,000 acres acquired by the former operators soon after the opening of the field. The Schwabb well is located some distance to the south of what is known as the Sunshine, where a number of wells have been drilled in the past and where some interesting showings have been encountered in the Hockleyensis. Operators seem to have very little doubt but that important production will be developed in the district.

### Spurger District

The Spurger district so far has not turned out very satisfactorily. The discovery well, Republic Production Co. and Houston Oil Co.'s No. 1 Sterne fee, Adolph Sterne Survey, blew in early in October making an estimated 20,000,000 to 30,000,000 feet of gas from a sand at a total depth of 4,708 feet and showed pressures of 1,750 pounds on tubing and 950 pounds on casing. Locations were made for several other tests but before those could be drilled the discovery well went bad and since has been deepened to a total depth of 5,619 feet where it was in water sand. It has been plugged back and efforts have been made unsuccessfully to complete it in a sand at 4,694 feet. Location of this wildcat is on a large block owned entirely by the above operators, which offers very little opportunity for competitive drilling development.

The Coyle-Concord Field in southern Colorado County also is sewed up as far as activity is concerned, the discovery well being in the middle of a 20,000-acre block, 6,000 acres of which is owned in fee. The discovery well, Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Survey, Section 43, blew in late in July estimated good for at least 50,000,000 feet of gas from sand at a total depth of 4,052 feet, showing a pressure of 1,500 pounds on the casing and 1,450 pounds on the tubing through a quarter-inch choke. The test previously had encountered several other gas sands, in which wells could have been completed, operators believe. This well has been standing shut in since then pending negotiations for a trade, completion of which negotiations were announced in December. The trade as announced is in the form of an option on the part of the Humble Oil & Refining Co. for a half interest in approximately 10,000 acres and which calls for the drilling by Humble of at least one test, which already has been started. Coyle-Concord Oil Co. was reimbursed in the deal for expenditures in connection with the discovery. The latter company prior to drilling the discovery well had worked the area geophysically and had drilled a number of shallow core tests.

### Numerous Other Discoveries

Other entirely new discoveries on the

## Gulf Coast (Continued)

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOST LAKE | | | | | | | | | | | | | |
| Daily average | 285 | 336 | 345 | 351 | 309 | 608 | 477 | 391 | 385 | 380 | 329 | 300 | |
| Month | 8,330 | 9,740 | 10,694 | 10,524 | 9,580 | 18,228 | 14,782 | 12,127 | 11,547 | 11,785 | 9,866 | 9,305 | 136,508 |
| KEERAN: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 105 | 426 | 356 | 325 | 309 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3,258 | 12,788 | 11,032 | 9,749 | 9,578 | 46,405 |
| MANVEL: | | | | | | | | | | | | | |
| Daily average | 401 | 358 | 233 | 359 | 395 | 392 | 398 | 344 | 779 | 506 | 588 | 584 | |
| Month | 12,438 | 10,388 | 7,222 | 10,774 | 12,241 | 11,754 | 12,331 | 10,660 | 23,377 | 15,680 | 17,642 | 18,101 | 162,608 |
| MARKHAM: | | | | | | | | | | | | | |
| Daily average | 1,730 | 1,335 | 1,301 | 1,213 | 1,108 | 1,837 | 1,757 | 1,667 | 1,414 | 1,432 | 1,349 | 1,457 | |
| Month | 53,636 | 38,710 | 40,335 | 36,389 | 34,342 | 55,096 | 54,462 | 51,678 | 42,426 | 44,396 | 40,467 | 45,165 | 537,102 |
| McFADDIN: | | | | | | | | | | | | | |
| Daily average | ..... | 264 | 99 | 41 | 30 | 11 | 8 | ..... | ..... | ..... | ..... | ..... | |
| Month | ..... | 7,658 | 3,068 | 1,233 | 929 | 344 | 246 | ..... | ..... | ..... | ..... | ..... | 13,478 |
| MOSS BLUFF: | | | | | | | | | | | | | |
| Daily average | 118 | 129 | 123 | 118 | 127 | 117 | 106 | 99 | 93 | 86 | 85 | 76 | |
| Month | 3,658 | 3,744 | 3,810 | 3,536 | 3,935 | 3,500 | 3,288 | 3,064 | 2,781 | 2,660 | 2,556 | 2,354 | 38,886 |
| MYKAWA: | | | | | | | | | | | | | |
| Daily average | 24 | ..... | 106 | 284 | 622 | 283 | 511 | 403 | 274 | 238 | 371 | 412 | |
| Month | 749 | ..... | 3,285 | 8,521 | 19,283 | 8,490 | 15,845 | 12,495 | 8,218 | 7,378 | 11,130 | 12,771 | 108,165 |
| NASH: | | | | | | | | | | | | | |
| Daily average | 183 | 175 | 173 | 169 | 153 | 151 | 155 | 145 | 73 | 143 | 132 | 135 | |
| Month | 5,670 | 5,071 | 5,366 | 5,074 | 4,741 | 4,525 | 4,805 | 4,498 | 2,197 | 4,436 | 3,954 | 4,189 | 54,526 |
| NORTH DAYTON: | | | | | | | | | | | | | |
| Daily average | 387 | 298 | 341 | 341 | 331 | 319 | 314 | 477 | 198 | 178 | 172 | 173 | |
| Month | 11,993 | 8,645 | 10,570 | 10,235 | 10,259 | 9,555 | 9,738 | 14,781 | 5,932 | 5,512 | 5,165 | 5,365 | 107,750 |
| ORANGE: | | | | | | | | | | | | | |
| Daily average | 1,413 | 1,358 | 1,320 | 1,316 | 1,249 | 1,351 | 1,319 | 1,325 | 1,314 | 1,298 | 1,196 | 1,184 | |
| Month | 43,805 | 39,381 | 40,927 | 39,473 | 41,818 | 40,539 | 40,881 | 41,077 | 39,428 | 40,236 | 35,886 | 36,709 | 480,160 |
| ORCHARD: | | | | | | | | | | | | | |
| Daily average | 1,066 | 1,108 | 1,318 | 1,345 | 1,195 | 901 | 1,012 | 1,732 | 1,536 | 1,671 | 1,576 | 1,516 | |
| Month | 33,049 | 32,137 | 40,856 | 40,350 | 37,047 | 27,030 | 31,375 | 53,699 | 46,084 | 51,807 | 47,278 | 46,988 | 487,700 |
| PIERCE JUNCTION: | | | | | | | | | | | | | |
| Daily average | 5,165 | 5,515 | 6,063 | 5,413 | 5,101 | 4,530 | 4,493 | 4,339 | 5,248 | 4,826 | 4,481 | 5,096 | |
| Month | 160,112 | 159,938 | 187,955 | 162,396 | 158,130 | 135,908 | 139,288 | 134,501 | 157,430 | 149,608 | 134,431 | 157,976 | 1,837,673 |
| PORT NECHES: | | | | | | | | | | | | | |
| Daily average | 1,030 | 927 | 849 | 1,182 | 1,193 | 1,135 | 1,368 | 2,317 | 2,040 | 1,577 | 1,418 | 1,632 | |
| Month | 31,933 | 26,880 | 26,316 | 35,462 | 36,984 | 34,054 | 42,401 | 71,828 | 61,205 | 48,889 | 42,543 | 50,598 | 509,093 |
| RABBS RIDGE: | | | | | | | | | | | | | |
| Daily average | 9,455 | 8,557 | 8,030 | 9,301 | 10,097 | 12,482 | 14,691 | 16,145 | 17,984 | 10,937 | 10,018 | 10,694 | |
| Month | 293,108 | 248,155 | 248,936 | 279,023 | 313,002 | 374,463 | 455,420 | 500,492 | 539,522 | 339,043 | 300,536 | 331,513 | 4,223,213 |
| RACCOON BEND: | | | | | | | | | | | | | |
| Daily average | 5,063 | 4,854 | 4,919 | 4,860 | 4,920 | 4,743 | 5,445 | 5,232 | 5,038 | 4,787 | 4,260 | 4,862 | |
| Month | 156,956 | 140,766 | 152,484 | 145,803 | 152,518 | 142,298 | 168,798 | 162,195 | 151,134 | 148,391 | 127,805 | 150,725 | 1,799,873 |
| REFUGIO: | | | | | | | | | | | | | |
| Daily average | 13,507 | 11,462 | 10,382 | 9,759 | 9,426 | 9,482 | 9,337 | 9,638 | 9,243 | 8,534 | 7,625 | 7,117 | |
| Month | 418,712 | 332,396 | 321,845 | 292,761 | 292,207 | 284,469 | 289,442 | 298,778 | 277,295 | 264,558 | 228,747 | 220,622 | 3,521,832 |
| ROCKLAND: | | | | | | | | | | | | | |
| Daily average | 5 | ..... | 2 | 11 | 20 | 30 | 25 | 16 | 15 | 15 | 17 | 18 | |
| Month | 155 | ..... | 63 | 334 | 619 | 901 | 778 | 499 | 450 | 465 | 520 | 553 | 5,337 |
| SARATOGA: | | | | | | | | | | | | | |
| Daily average | 949 | 944 | 1,005 | 961 | 947 | 897 | 838 | 817 | 845 | 730 | 806 | 831 | |
| Month | 29,415 | 27,372 | 31,152 | 28,835 | 29,355 | 26,909 | 25,970 | 25,323 | 25,355 | 22,635 | 24,172 | 25,769 | 322,262 |
| SOUR LAKE: | | | | | | | | | | | | | |
| Daily average | 1,575 | 1,671 | 1,557 | 1,552 | 1,564 | 1,573 | 1,488 | 1,578 | 1,547 | 1,489 | 1,314 | 1,339 | |
| Month | 48,825 | 48,456 | 48,266 | 46,562 | 48,487 | 47,186 | 46,129 | 48,914 | 46,413 | 46,153 | 39,421 | 41,511 | 556,323 |
| SOUTH LIBERTY: | | | | | | | | | | | | | |
| Daily average | 1,344 | 1,199 | 1,161 | 1,107 | 1,086 | 1,093 | 1,085 | 990 | 953 | 943 | 900 | 913 | |
| Month | 41,668 | 34,774 | 35,991 | 33,209 | 33,668 | 32,798 | 33,638 | 30,695 | 28,583 | 29,236 | 27,011 | 28,304 | 389,576 |
| SPINDLETOP: | | | | | | | | | | | | | |
| Daily average | 4,907 | 4,627 | 4,283 | 4,100 | 3,829 | 3,319 | 3,710 | 3,706 | 3,642 | 3,735 | 3,713 | 3,739 | |
| Month | 152,110 | 134,185 | 132,773 | 123,011 | 118,696 | 99,556 | 115,015 | 114,880 | 109,264 | 115,780 | 111,383 | 115,907 | 1,442,560 |
| SUGARLAND: | | | | | | | | | | | | | |
| Daily average | 9,700 | 10,154 | 10,133 | 7,998 | 9,992 | 10,038 | 9,953 | 9,889 | 9,826 | 8,370 | 8,005 | 8,234 | |
| Month | 300,702 | 294,461 | 314,126 | 239,944 | 309,751 | 301,131 | 308,543 | 306,555 | 294,778 | 259,475 | 240,146 | 255,257 | 3,424,869 |
| WEST COLUMBIA: | | | | | | | | | | | | | |
| Daily average | 2,939 | 3,641 | 3,761 | 3,776 | 4,198 | 3,924 | 3,878 | 3,868 | 3,167 | 3,496 | 3,477 | 3,458 | |
| Month | 91,112 | 105,586 | 116,591 | 113,285 | 130,140 | 117,718 | 120,212 | 119,906 | 95,012 | 108,370 | 104,309 | 107,196 | 1,329,437 |
| Daily average | 105,924 | 101,033 | 101,664 | 100,425 | 107,062 | 109,412 | 112,328 | 120,573 | 132,001 | 122,984 | 125,750 | 126,326 | 113,825 |
| Month | 3,283,148 | 2,929,963 | 3,151,595 | 3,012,764 | 3,318,911 | 3,282,367 | 3,482,158 | 3,737,751 | 3,960,043 | 3,812,517 | 3,772,512 | 3,916,113 | 41,659,842 |

(Continued on Next Page)

Gulf Coast included Gueydan, Vermillion Parish, Louisiana, and Darrow, Ascension Parish, Louisiana; Buckeye, Matagorda County; Pledger, Brazoria County; Ariola, Hardin County; Keeran, Victoria County; and Gulf Production Co.'s O'Connor Ranch, in northern Refugio County. Two of these, Gueydan and Ariola, are known as salt domes. Buckeye and Pledger are on what are believed to be deeply seated domes. Keeran and the O'Connor diarticts are located in the lower coastal country, southwestward from the salt dome area.

In addition to these, a shallow pool was opened in the cap rock area of East Hackberry, and, on the northwest flank of the same dome, production was opened in deep sands. Two other shallow sand pools previously has been developed at East Hackberry as well as flank production on the south side. In the McFaddin district of northern Refugio County and southwestern Victoria County, some new production was opened but this played out and at present there is nothing but gas there.

Total production of the Gulf Coast fell off 5,097,237 bbls. during 1932 as compared with 1931, production for the year being 53,395,758 bbls. as compared with 58,492,995 bbls. of 1931. The reduction was the result of a general let-up in development the first six months of the year, in which drilling was suspended on many of the older fields and where as a result of the drop in new completions and curtailment of output under proration, production was materially reduced. Within the last six months, although there has been considerable new development, there has been very little actual new production except at Conroe, where the flow has been held in check.

As mentioned, drilling activity fell off noticeably during the first six months, which was reflected in a sharp decline in totals of monthly field summaries but the activity the last six months has more than made up for this, and, for the year as a whole there were 150 more completions than during 1931, as shown by accompanying tabular summaries. Of particular interest is the fact that most of this new activity was in Coastal Texas, drilling activity during the year in the Louisiana Coast having reflected a decided slump.

### Gueydan Led Louisiana Discoveries

Two producing wells have been completed at Gueydan, La., the first new field opened on the Gulf Coast during 1932. The discovery well, Pure Oil Co.'s No. 2 Alliance Trust Co., Section 34-11s-1w, was completed on April 22 in a sand at 3,532-52 feet, flowing initially at the rate of 800 bbls. daily of 25 gravity pipe line oil. Production in this sand, however, failed to hold up and the hole was deepened to 4,029 feet, where it was brought in making 38 bbls. hourly of 27.2 gravity pipe line oil. At this depth it has been a consistent producer, as has been the second well, No. 1 Mulvey, 430 feet southeast of the discovery well, which is in the sand at a total depth of 4,004 feet. Several tests had been drilled previously to these wells, one of which went into salt at 6,404-68 feet and was abandoned, but proved the dome. Pure Oil Co. holds approximately 75 per cent of the acreage on the dome, which was discovered by geophysical exploration. Two additional tests are drilling. Pure Oil Co. has laid a short line to the Intercoastal Canal and is barging the oil to Smiths Bluff.

### The Pledger Field

Of particular interest lately has been the new Pledger Field, northwestern Brazoria County, which Danciger Oil & Refining Co. and Hamill Drilling Co. opened in November by bringing a high pressure gas well from a deep sand at 6,758-82 feet. This well, No. 1 Hunt, W. Carson Survey, since completion has been making between 30 and 35 bbls. of distillate. Pressure of the well has been around 2,500 pounds, which offered considerable hazard in its completion. The discovery well was the first test drilled on the prospect, which was checked geophysically. As in the majority of newer coastal fields, ownership is controlled or in a comparatively few hands. The above operators have planned a systematic development program of their block and within the past couple of weeks have made location for a second test, approximately 1,200 feet to the south and east of the discovery well. Due to the pressure and the large estimated volume of gas, a major potential importance is believed to exist in the Pledger district.

### Ariola a Disappointment

At Ariola, Hardin County, Houston Oil Co. and Republic Production Co.'s No. 1 Ariola fee, Ariola Survey, first test drilled there on geophysical indications, was completed in August flowing approximately 500 bbls. daily net oil, but also about 800 bbls. salt water, from a sand at 4,171 feet. The hole previously had been drilled to a total depth of 4,324 feet where it went into salt proving the dome. Ariola so far has proved somewhat of a disappointment because, in addition to the discovery well showing considerable water and failing to hold up, subsequent drilling has been unsuccessful. Houston Oil Co.'s No. 1-X, an offset to the discovery well, was drilled to 4,167 feet in salt and abandoned. Gulf Production Co. drilled a 6,737-foot dry hole, its No. 1 Kirby, approximately three-quarters of a mile northwest of the discovery well, and Republic Production Co.'s No. 2 Ariola fee, offset to the Gulf test, also was abandoned. Two other tests, located in the vicinity of the discovery well, are being drilled and so far, although deep, have failed to find commercial production.

### Deepest Gulf Coast Field

In Matagorda County, at the townsite of Buckeye, south of Bay City, United North & South Development Co. opened another new field, the deepest on the Gulf Coast. The discovery well, No. 1 Stod-

## Gulf Coast Louisiana

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANSE LA BUTTE: | | | | | | | | | | | | | |
| Daily average | 55 | 57 | 57 | 55 | 50 | 45 | 53 | 96 | 50 | 53 | 53 | 54 | |
| Month | 1,700 | 1,656 | 1,769 | 1,649 | 1,550 | 1,345 | 1,649 | 2,974 | 1,505 | 1,640 | 1,592 | 1,676 | 20,705 |
| BAYOU BLUE: | | | | | | | | | | | | | |
| Daily average | 20 | 15 | 15 | 15 | 6 | ..... | 435 | ..... | ..... | ..... | ..... | ..... | |
| Month | 622 | 431 | 465 | 452 | 187 | ..... | 13,458 | .. .. | ..... | ..... | ..... | ..... | 15,645 |
| BLACK BAYOU: | | | | | | | | | | | | | |
| Daily average | 1,286 | 1,261 | 1,198 | 1,082 | 1,076 | 905 | 821 | 795 | 867 | 746 | 717 | 692 | |
| Month | 39,869 | 36,563 | 37,136 | 32,458 | 33,354 | 27,139 | 25,458 | 24,648 | 26,001 | 23,122 | 21,514 | 21,451 | 348,713 |
| CHOCTAW: | | | | | | | | | | | | | |
| Daily average | 451 | 485 | 483 | 444 | 428 | 405 | 398 | 360 | 343 | 330 | 377 | 322 | |
| Month | 13,984 | 14,060 | 14,972 | 13,326 | 13,263 | 12,144 | 12,333 | 11,166 | 10,296 | 10,235 | 11,315 | 9,980 | 147,074 |
| CAMERON MEADOWS: | | | | | | | | | | | | | |
| Daily average | 293 | 279 | ..... | ..... | ..... | 128 | ..... | ..... | 42 | 41 | 41 | 34 | |
| Month | 9,080 | 8,096 | ..... | ..... | ..... | 3,825 | ..... | ..... | 1,264 | 1,276 | 1,229 | 1,052 | 25,822 |
| EDGERLY: | | | | | | | | | | | | | |
| Daily average | 217 | 240 | 203 | 221 | 267 | 242 | 236 | 204 | 175 | 182 | 181 | 152 | |
| Month | 6,728 | 6,968 | 6,294 | 6,631 | 8,278 | 7,261 | 7,314 | 6,320 | 5,245 | 5,648 | 5,427 | 4,716 | 76,830 |
| GUEYDAN: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | 66 | 60 | 551 | 1,068 | 694 | 1,502 | 1,347 | 997 | 712 | |
| Month | ..... | ..... | ..... | 1,977 | 1,859 | 16,532 | 33,108 | 21,518 | 45,068 | 41,753 | 29,909 | 22,079 | 215,803 |
| HACKBERRY (EAST): | | | | | | | | | | | | | |
| Daily average | 4,806 | 3,456 | 4,304 | 8,035 | 8,523 | 6,085 | 5,598 | 4,608 | 4,187 | 4,893 | 5,818 | 6,693 | |
| Month | 148,982 | 100,225 | 133,429 | 241,057 | 264,215 | 182,540 | 173,534 | 142,842 | 125,612 | 151,687 | 174,532 | 207,482 | 2,046,137 |
| HACKBERRY (OLD): | | | | | | | | | | | | | |
| Daily average | 602 | 589 | 570 | 566 | 473 | 520 | 491 | 506 | 537 | 486 | 497 | 617 | |
| Month | 18,668 | 17,086 | 17,670 | 16,985 | 14,666 | 15,608 | 15,220 | 15,680 | 16,106 | 15,060 | 14,913 | 19,121 | 196,783 |
| IOWA: | | | | | | | | | | | | | |
| Daily average | 516 | 512 | 488 | 552 | 1,024 | 1,023 | 1,504 | 1,521 | 1,464 | 2,009 | 2,140 | 2,484 | |
| Month | 15,990 | 14,843 | 15,126 | 16,558 | 31,743 | 30,701 | 46,629 | 47,159 | 43,927 | 62,273 | 64,204 | 77,011 | 466,164 |
| JENNINGS: | | | | | | | | | | | | | |
| Daily average | 517 | 438 | 399 | 422 | 451 | 913 | 948 | 1,286 | 1,268 | 1,405 | 1,278 | 681 | |
| Month | 16,029 | 12,702 | 12,366 | 12,661 | 13,985 | 27,992 | 29,385 | 39,866 | 38,636 | 43,555 | 38,336 | 21,115 | 306,628 |
| LAKE BARRE: | | | | | | | | | | | | | |
| Daily average | 3,851 | 4,452 | 5,190 | 6,910 | 8,912 | 7,538 | 7,396 | 6,921 | 10,490 | 8,183 | 9,000 | 8,699 | |
| Month | 119,386 | 129,104 | 160,890 | 207,305 | 276,274 | 226,149 | 229,274 | 214,555 | 314,702 | 253,677 | 269,991 | 269,663 | 2,670,970 |
| LAKE PELTO: | | | | | | | | | | | | | |
| Daily average | 56 | 68 | 59 | 66 | 65 | 79 | 60 | 52 | 64 | 65 | 66 | 59 | |
| Month | 1,730 | 1,972 | 1,828 | 1,979 | 2,010 | 2,375 | 1,866 | 1,618 | 1,926 | 2,010 | 1,977 | 1,828 | 23,119 |
| LAKE WASHINGTON: | | | | | | | | | | | | | |
| Daily average | 200 | 325 | 531 | 374 | 705 | 509 | 553 | 499 | 435 | 356 | 402 | 337 | |
| Month | 6,203 | 9,420 | 16,262 | 11,222 | 21,853 | 15,278 | 17,141 | 15,463 | 13,043 | 16,038 | 12,065 | 10,443 | 153,431 |
| LEESVILLE: | | | | | | | | | | | | | |
| Daily average | 1,172 | 811 | 799 | 1,155 | 869 | 835 | 745 | 723 | 658 | 407 | 369 | 510 | |
| Month | 36,332 | 23,516 | 24,767 | 34,641 | 26,937 | 25,057 | 23,099 | 22,417 | 19,744 | 12,619 | 11,072 | 15,808 | 276,009 |
| LOCKPORT: | | | | | | | | | | | | | |
| Daily average | 3,929 | 3,123 | 2,886 | 2,869 | 2,567 | 2,327 | 2,386 | 2,267 | 2,059 | 3,229 | 2,614 | 1,859 | |
| Month | 121,795 | 90,569 | 89,465 | 86,075 | 79,573 | 69,796 | 73,960 | 70,271 | 61,763 | 100,097 | 78,423 | 57,633 | 979,420 |
| PORT BARRE: | | | | | | | | | | | | | |
| Daily average | 572 | 629 | 999 | 1,323 | 1,221 | 1,366 | 1,430 | 1,941 | 2,206 | 2,140 | 2,546 | 2,097 | |
| Month | 17,737 | 18,247 | 30,968 | 39,693 | 37,858 | 40,978 | 44,337 | 60,179 | 66,174 | 66,340 | 76,376 | 65,003 | 563,890 |
| SORRENTO: | | | | | | | | | | | | | |
| Daily average | 90 | 75 | 63 | 64 | 32 | 55 | 18 | 18 | 27 | 24 | 59 | 50 | |
| Month | 2,793 | 2,178 | 1,954 | 1,916 | 994 | 1,652 | 554 | 554 | 813 | 748 | 1,768 | 1,548 | 17,472 |
| STARKS: | | | | | | | | | | | | | |
| Daily average | 555 | 583 | 583 | 580 | 514 | 609 | 590 | 656 | 584 | 529 | 1,874 | 1,803 | |
| Month | 17,200 | 16,902 | 18,075 | 17,395 | 15,931 | 18,258 | 18,296 | 20,338 | 17,526 | 16,391 | 56,224 | 55,891 | 288,427 |
| SULPHUR: | | | | | | | | | | | | | |
| Daily average | 3,868 | 4,040 | 2,431 | 2,446 | 2,497 | 2,009 | 2,017 | 2,173 | 1,744 | 1,518 | 1,363 | 1,059 | |
| Month | 119,903 | 117,166 | 75,362 | 73,381 | 77,409 | 60,267 | 62,522 | 67,365 | 52,322 | 47,052 | 40,893 | 32,825 | 826,467 |
| SWEET LAKE: | | | | | | | | | | | | | |
| Daily average | 900 | 873 | 839 | 774 | 699 | 697 | 732 | 700 | 734 | 667 | 639 | 610 | |
| Month | 27,909 | 25,310 | 26,009 | 23,225 | 21,663 | 20,911 | 22,698 | 21,700 | 22,028 | 20,679 | 19,172 | 18,912 | 270,216 |
| VINTON: | | | | | | | | | | | | | |
| Daily average | 4,369 | 4,473 | 4,519 | 4,416 | 4,397 | 4,609 | 4,425 | 4,277 | 4,293 | 4,203 | 4,079 | 4,012 | |
| Month | 135,436 | 129,714 | 140,089 | 132,474 | 136,306 | 138,263 | 137,172 | 132,583 | 128,787 | 130,297 | 122,376 | 124,373 | 1,587,870 |
| WELSH: | | | | | | | | | | | | | |
| Daily average | 8 | 5 | 5 | 5 | 5 | 53 | 82 | 148 | 69 | 66 | 63 | 57 | |
| Month | 248 | 145 | 158 | 148 | 154 | 1,605 | 2,540 | 4,582 | 2,070 | 2,042 | 1,893 | 1,769 | 17,354 |
| WHITE CASTLE: | | | | | | | | | | | | | |
| Daily average | 541 | 545 | 563 | 539 | 543 | 544 | 534 | 541 | 529 | 523 | 529 | 527 | |
| Month | 16,779 | 15,802 | 17,455 | 16,165 | 16,837 | 16,317 | 16,551 | 16,775 | 15,863 | 16,211 | 15,872 | 16,336 | 196,967 |
| Daily average | 28,874 | 27,334 | 26,984 | 32,979 | 35,384 | 32,067 | 32,520 | 30,986 | 34,347 | 33,402 | 35,702 | 34,120 | 32,065 |
| Total month | 895,103 | 792,675 | 836,509 | 989,377 | 1,096,899 | 961,993 | 1,008,128 | 960,573 | 1,030,421 | 1,035,450 | 1,071,073 | 1,057,715 | 11,735,916 |
| Total Gulf Coast daily average | 134,798 | 128,367 | 128,648 | 133,404 | 142,446 | 141,479 | 144,848 | 151,559 | 166,348 | 156,386 | 161,452 | 160,446 | 145,890 |
| Total Gulf Coast 1932 | 4,178,761 | 3,722,638 | 3,988,104 | 4,002,141 | 4,415,809 | 4,244,365 | 4,490,286 | 4,698,324 | 4,990,464 | 4,848,967 | 4,843,585 | 4,973,828 | 53,395,758 |
| Total 1931 | 5,598,347 | 4,836,692 | 5,081,815 | 5,354,911 | 5,499,710 | 4,881,273 | 4,684,148 | 4,499,463 | 4,268,397 | 4,499,371 | 4,546,265 | 4,573,216 | 58,492,995 |
| Total 1930 | 5,881,489 | 5,619,270 | 6,105,265 | 5,930,067 | 6,181,740 | 6,214,648 | 6,320,149 | 6,214,883 | 5,824,543 | 5,800,475 | 5,415,591 | 5,642,394 | 71,200,514 |
| Total 1929 | 4,344,233 | 3,959,613 | 4,536,507 | 4,705,904 | 4,673,923 | 4,484,434 | 4,749,161 | 4,956,783 | 5,007,570 | 5,486,792 | 5,591,438 | 5,554,487 | 58,101,845 |
| Total 1928 | 3,796,856 | 3,652,390 | 3,796,816 | 3,760,253 | 4,155,544 | 4,114,796 | 4,378,872 | 4,188,943 | 3,948,578 | 3,842,655 | 3,996,644 | 4,200,073 | 47,868,342 |
| Total 1927 | 5,232,366 | 4,409,580 | 4,827,581 | 4,420,560 | 4,762,127 | 4,612,620 | 4,432,535 | 4,301,901 | 4,258,890 | 4,379,432 | 4,176,450 | 4,350,044 | 54,174,086 |
| Total 1926 | 3,023,877 | 2,820,608 | 3,034,683 | 2,842,050 | 3,208,721 | 2,849,970 | 3,785,069 | 5,287,019 | 5,655,960 | 5,433,029 | 5,285,730 | 5,570,607 | 48,806,575 |

dard, on the edge of the townsite in the J. C. Keller Survey, was completed in September in a sand at 7,808-7,924 feet and made 1,850 bbls. daily of 38.5 gravity pipe line oil. The well previously had blown out and was out of control for a week until new connections could be installed. The well proved a good producer, so far having made a total of 107,854 bbls., but late in the year water broke in to such an extent that the well now is being rigged up to work over. The hole had been drilled to a total depth of 7,951 feet and had been plugged back to 7,926 feet. The deepest production previously had been in a 7,400-7,500-foot horizon on the southeast side of the Jennings Field, Acadia Parish, Louisiana, where Yount Lee Oil Co. several years ago completed three wells. Another deep test recently was started at Buckeye. Development was delayed for several months due to a desire on the part of United North & South Development Co. to sell the block. Later the company changed its plan and decided to drill the field itself. This company controls a block of approximately 9,000 acres.

### Keeran Ranch Discovery

Another one of the new fields was at Keeran ranch, southeastern Victoria County, Texas. There, Bunte and associates' first test, No. 1 Keeran, Martin DeLeon Survey, was completed in January as a wet gas well in a sand at a total depth of 5,191 feet. The well was drilled on a 2,000-acre lease "farmed" out to Bunte and associates by Gulf Production Co., which had a total of 5,000 acres. After completion of the gasser, the acreage was pooled on a second test, 200 feet east of No. 1, started. It missed the sand in the first well and was drilled to a sand found at 5,831-51 feet and completed as the first oil producer. On the same ranch, but some distance from the Bunte and Gulf wells, Cullen & West drilled a dry hole at 6,606 feet and Union Oil Co. another which was abandoned at 6,670 feet. The latter company, however, is drilling a second test, which has encountered several sands which give promise of opening additional production. Bunte and Gulf also are drilling a third test, which also has had some showings but which now is down below 6,100 feet.

Keeran has the earmarks of the other fields which have been developed in the lower coastal country in which an extremely lenticular condition has been found. It is located some 15 miles across the county from the McFaddin district, where considerable gas production has been proved extending over a wide territory and coming from numerous sands. Three oil wells also have been completed in the McFaddin district, each in a different sand, but none has held up. The discovery well, Humble Oil & Refining Co.'s No. 1 O'Connor, just across from Victoria County in northern Refugio County, was completed in December of 1931 at 4,155 feet. It produced in all only a few hours and recently was deepened to 5,972 feet and abandoned. Humble's second test, drilled this year, made a gasser in a deep sand, and No. 3 produced some oil but now is deepening. The Texas Company's No. 3 McFaddin, Victoria County, was completed January 1, 1932, as an oil well, the first in the county, and although it produced several months from the sand at 5,835 feet, the output declined rapidly to a small figure and the hole recently was deepened and abandoned as dry. Several deep dry holes were drilled in the area during the year.

Approximately 10 miles westward Gulf Production Co. drilled a wildcat on its O'Connor block on the Refugio-Goliad County line and in a sand at 5,705-07 feet was completed in September as a dry gas well with a pressure of 2,200 pounds. It was shut in and a couple of months later when it was opened for fuel for another test it was not there so now is being drilled deeper.

### Mississippi River Bed Productive

The Darrow salt prospect, located in the Mississippi River, in Ascension Parish, Louisiana, was proved for production in September by Rio Bravo Oil Co., whose first test, No. 1 Community, Section 15-10s-2e, found a sand at a total depth of 4,035 feet and was completed flowing 490 bbls. of pipe line oil in the first 10 hours through a quarter inch choke. After 10 hours it was shut in for storage and except for a short period in December it has been shut in since. When opened at that time it showed some water. Rio Bravo Oil Co. has a half interest with Gulf Refining Co. in 3,000 acres which the latter company gave for a well. Gulf discovered the prospect several years ago in geophysical exploration and has drilled one deep hole. Rio Bravo Oil Co. now is building storage, a warehouse and camp, and a loading dock for barges. The location of the well is right on the bank of the river, which facilitates movement of the oil by water. Two additional tests have been started.

### Wells Did Not Hold Up

At East Hackberry, Calcasieu Oil Co.'s No. 1 Unsurveyed Island, in March opened some cap rock and new shallow sand production around 2,800-2,900 feet and started a new drilling spurt. Quite a few wells were drilled but the development was not entirely satisfactory as the wells failed to hold up and the production was accompanied by considerable water. This pool is one of three shallow pools opened on top the dome. Flank production was opened on the northwest side of the dome when Union Sulphur Co.'s No. 1 Gulf Land-Humble lease was brought in, also in March, flowing 1,500 bbls. of 34,3 gravity oil from sand at a total depth of 6,001 feet. Two additional wells have been completed in the sand since then and all have proved unusually consistent.

A new flank pool was opened on the northeast side of Sour Lake by Prudential Oil Co.'s No. 1 Maco Stewart but this failed to hold up and a couple of other tests were drilled there without success. On the southwest side of Hull, a little drilling took place in a new Oligocene sand below 4,200 feet and several fair wells were completed. At Esperson, Liberty County, commercial production was opened in a new sand in the Oligocene at 4,100 feet by Cranfill-Reynolds Co., which controls the field, but there has been no important development in it.

### Production Below "Overhang"

At Lake Barre, Terrebonne Parish, several wells were drilled through salt and found prolific production in sands underlying the "overhang" such as previously had been done principally at Barbers Hill, and also at several other domes. An important overhang also was found to exist at High Island, Galveston County, but so far no production has been developed under it. The latter field was one of several to undergo important development, Yount Lee Oil Co., which during the preceding year had acquired control of the dome, keeping five rigs running. A pipe line outlet for the field was provided by that company, which laid a 12-inch line to its tank farm and terminal at Beaumont, a distance of 45 miles.

### Rabbs Ridge Was Conspicuous

Rabbs Ridge, Fort Bend County, figured conspicuously in coastal development during 1932. Humble Oil & Refining Co. and Gulf Production Co. jointly control and operate the field and have been carrying on an active but systematic program of development in the deep pay horizon around 5,200-5,300 feet. Humble became an operator in the field early in 1932 when it purchased the half interest formerly owned by Cullen & West, who drilled the discovery well in June, 1930. A new idea of the value of salt dome production was given when Humble agreed to pay a total of $20,000,000 for the half interest, giving $3,000,000 in cash. Under the joint development of Humble and Gulf this year the field was proved up over more than 2,500 acres, which is large for a salt dome field. Development, however, during the closing months of the year jumped out of the jointly owned block when The Texas Company drilled a good well on its Wolters tract, north of the Humble and Gulf joint block. The well was a half mile north of production, and being in a place where acreage was cut up among a number of different owners, it resulted in an active drilling campaign. More recently, another half mile north extension was made by H. M. Naylor's No. 1 Whitmore but completion of this well so far has been entirely successful.

Edwin Jones created considerable interest at Refugio when he drilled his No. 1-B Mitchell, on the south side of the field, to a total depth of 9,124 feet and found a sand showing oil. On testing, however, this well flowed fresh water and has been abandoned. Another deep test now is being drilled by this operator.

Continued exploration of subsalt sands featured work at Barbers Hill and drilling kept up fairly steady throughout the entire year. There were no particularly new developments at that dome. New production was brought in on a number of newer fields, such as Manvel, Iowa and Port Neches, but was of no general interest except as additional potential oil reserve for companies operating those fields.

### Interesting Wildcats

A wildcat being drilled by Smith and associates on Shell Petroleum Corp.'s Lake View block in Wharton County was one of the more closely watched wildcats drilled during the active wildcatting play which got under way during the closing months of the year. That wildcat, No. 1 Mitchell, H.&T.C. Survey No. 8, first test on the geophysical prospect, encountered a number of important gas sands giving indication of the existence of another new field in that vicinity. It is located about 15 miles southeast from Coyle-Concord Oil Co.'s wildcat gasser in southern Colorado County. Wharton County has been one of the most actively wildcatted counties on the coast and more than a half dozen "hot" tests have been drilled within the last several months.

In the Huffsmith district of northern Harris County, a little leasing activity was created when Indian Hill Oil Co.'s No. 1 Schweinle, William White Survey, picked up a broken sand at 5,514-80 feet and in a drill stem test showed some gas. The sand was believed to have been the same as that producing in the Conroe Field, 15 miles northeast, and the showings were sufficient to cause Mills Bennett Production Co. to assist in carrying the hole deeper to "look at the bottom." The test was abandoned at 6,110 feet, but the latter company since has done some reflection shooting in the district and has started another test.

Considerable wildcatting was done in that district comprising Jasper, Newton, Tyler, eastern Hardin and northern Orange Counties, and nearly a dozen deep holes were drilled on as many different wildcat blocks and prospects.

Two additional salt domes were proved up during the year, these being Ariola, Hardin County, and Leesville, LaFourche Parish, Louisiana. The drilling into salt at Ariola has been mentioned previously. At Leesville, The Texas Company's No. 5 L.L.&E. topped salt at 4,107 feet, the first test there to drill into the salt. Leesville, however, has been productive since 1931.

A summary of completions for the year by fields and by months follows:

**GULF COAST**

**Summary of Completed Wells in 1932**

**Texas**

| Field— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| Ariola | 4 | 320 | 3 | 0 |
| Barbers Hill | 66 | 54,454 | 9 | 1 |
| Batson | 15 | 146 | 2 | 0 |
| Big Creek | 3 | 55 | 2 | 0 |
| Blue Ridge | 6 | 2,646 | 1 | 0 |
| Boling | 2 | 0 | 2 | 0 |
| Brenham | 2 | 0 | 2 | 0 |
| Clay Creek | 2 | 0 | 2 | 0 |
| Conroe | 100 | 137,877 | 11 | 3 |
| Damon Mound | 5 | 70 | 4 | 0 |
| Esperson | 6 | 1,070 | 0 | 0 |
| Fannett | 6 | 0 | 6 | 0 |
| Goose Creek | 5 | 49 | 1 | 0 |
| Hankamer | 2 | 1,980 | 0 | 0 |
| High Island | 18 | 14,157 | 2 | 0 |
| Hull | 31 | 4,929 | 9 | 0 |
| Humble | 49 | 4,343 | 15 | 1 |
| Liberty | 2 | 990 | 0 | 0 |
| Lost Lake | 3 | 850 | 1 | 0 |
| Manvel | 4 | 2,640 | 1 | 0 |
| Markham | 16 | 1,105 | 13 | 1 |
| Moss Bluff | 16 | 0 | 16 | 0 |
| Mykawa | 6 | 1,190 | 1 | 1 |
| Nash | 1 | 0 | 1 | 0 |
| North Dayton | 2 | 5 | 1 | 0 |
| Orange | 7 | 117 | 3 | 0 |
| Orchard | 4 | 3,300 | 1 | 0 |
| Pierce Junction | 33 | 8,395 | 12 | 0 |
| Port Neches | 7 | 3,435 | 1 | 0 |
| Rabbs Ridge | 69 | 70,935 | 7 | 0 |
| Raccoon Bend | 5 | 1,786 | 3 | 0 |
| Refugio | 34 | 2,880 | 7 | 3 |
| Rockland | 6 | 50 | 4 | 0 |
| Saratoga | 28 | 551 | 7 | 0 |
| Sour Lake | 4 | 817 | 2 | 0 |
| Spindletop | 1 | 25 | 0 | 0 |
| West Columbia | 3 | 0 | 3 | 0 |
| Miscellaneous | 128 | 3,775 | 113 | 9 |
| Total 1932 | 692 | 324,942 | 268 | 19 |
| Total 1931 | 544 | 162,638 | 230 | 22 |
| Difference | 148 | 162,304 | 38 | 3 |

**Louisiana**

| Field— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| Bayou Blue | 1 | 0 | 1 | 0 |
| Black Bayou | 1 | 400 | 0 | 0 |
| Choctaw | 3 | 300 | 2 | 0 |
| Edgerly | 5 | 81 | 2 | 0 |
| Gueydan | 3 | 2,045 | 0 | 0 |
| Hackberry (East) | 45 | 33,608 | 11 | 0 |
| Hackberry (Old) | 10 | 62 | 8 | 0 |
| Iowa | 4 | 3,725 | 0 | 0 |
| Jennings | 12 | 281 | 6 | 0 |
| Lake Barre | 11 | 19,787 | 0 | 0 |
| Lake Pelto | 2 | 0 | 2 | 0 |
| Lake Washington | 7 | 7,220 | 5 | 0 |
| Leesville | 5 | 3,200 | 2 | 0 |
| Lockport | 6 | 2,010 | 2 | 1 |
| Port Barre | 7 | 5,355 | 1 | 0 |
| Sorrento | 1 | 0 | 1 | 0 |
| Starks | 5 | 1,455 | 1 | 0 |
| Sulphur | 9 | 8,477 | 3 | 0 |
| Sweet Lake | 1 | 0 | 1 | 0 |
| Vinton | 9 | 1,310 | 5 | 0 |
| Miscellaneous | 42 | 1,200 | 41 | 0 |
| Total 1932 | 189 | 90,516 | 94 | 1 |
| Total 1931 | 187 | 59,906 | 99 | 3 |
| Difference | 2 | 30,610 | 5 | 2 |
| Total Gulf Coast 1932 | 881 | 415,458 | 362 | 20 |
| Total Gulf Coast 1931 | 731 | 222,544 | 329 | 25 |
| Difference | 150 | 192,914 | 33 | 5 |

**Completions by Months**

| Month— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| January | 59 | 31,429 | 18 | 3 |
| February | 62 | 23,203 | 38 | 0 |
| March | 42 | 12,407 | 18 | 0 |
| April | 64 | 26,220 | 28 | 2 |
| May | 75 | 26,664 | 32 | 1 |
| June | 66 | 16,145 | 33 | 2 |
| July | 80 | 30,998 | 39 | 1 |
| August | 64 | 25,016 | 23 | 2 |
| September | 90 | 39,458 | 33 | 3 |
| October | 103 | 47,629 | 43 | 3 |
| November | 88 | 60,039 | 29 | 1 |
| December | 97 | 76,250 | 28 | 2 |
| Total 1932 | 881 | 415,458 | 362 | 20 |

## California Fields

(Continued from Page 51)

the bit is at the present time rotating slightly below the 500-foot level.

### Kettleman Hills

The North Kettleman Oil & Gas Co. is reaming out No. 1 Lillis-Welsh preparatory to landing and cementing a string of specially fabricated 7-inch casing. This pipe will be landed at approximately 9,650 feet, upon the conclusion of which the company may add a little more hole before conducting a production test. Sufficient finances have been provided to carry this hole down to 11,000 feet, if necessary. A new well is scheduled to be started out on the north flank in Section 36-21-17 some time during the course of the next week or so. The rig for this projected deep test has already been constructed and rotary drilling equipment is being moved in. The site selected by the Kettleman Hills North Dome Royalty Syndicate is approximately 2,500 feet north and east of the Associated's Whepley lease and slightly northwest of No. 1 Blauvelt, drilled and abandoned by the North American Oil Consolidated last year. Heavy drilling equipment has been procured and sufficient finances provided to drill down to 11,000 feet, if necessary. This projected deep test may prove of more importance than would appear from a casual observation as the bottom of the productive column has not been reached by any means in the North Dome. Recent developments in the North Belridge Field indicate the possibility that Eocene production may ultimately be developed in the North Dome and if this proves true, the productive limits may be found to be larger than developments indicate at the present time.

## GEOLOGISTS ELECT OFFICERS

DENVER, Colo., Jan. 23.—The Rocky Mountain Association of Petroleum Geologists recently elected officers as follows: A. E. Brainard, Continental Oil Co., president; Herman F. Davies, California Co., vice president; J. G. Bartram, Stanolind Oil & Gas Co., vice president; G. G. Law, U. S. Geological Survey, secretary.

# No New Fields in California in 1932 But Deeper Drilling Uncovered Important Production

By L. P. STOCKMAN
Staff Correspondent, California Fields

The past year was one of readjustment and retrenchment and, in line with general business, economies were effected by California operators in all branches of the industry. This reduction in operating expenses, made necessary by lower prices for crude and refined oils, was especially pronounced in development work and resulted in a substantial reduction in drilling operations. Important economies were likewise effected in the marketing end of the business and refining costs cut by increasing the efficiency of refineries and natural gasoline plants. A lower demand for refined oil in Pacific Coast territory and decreased off-shore shipments of petroleum necessitated several revisions in the crude oil curtailment program during the year. Because of the diminishing demand, the curtailment committee continued an almost unrelentless campaign for stricter proration and this work was further intensified later in the year by an abnormal decline in consumption. Refined oil prices were relatively stable in California during the greater part of 1932 but the importation of three cargoes of Texas gasoline caused severe price recessions in the Pacific Northwest during the latter part of the year.

There were no new fields discovered in California during the period in question, due primarily to the elimination or restriction in exploration work by both large and small operators. Important discoveries were made, however, in the North Belridge, San Miguelito and Ventura Avenue Fields, where deep drilling proved up the existence of new deep zones. The most important of these deep zone discoveries was made in the North Belridge Field of Kern County where the Belridge Oil Co. found the Wagonwheel zone unusually prolific in June, 1932. The discovery well, No. 64-27, in Section 27-27-20, registered an initial production of 2,050 bbls. of 50.5 gravity oil and 70,000,000 feet of natural gas per day from 8,062 feet. This well blew in prematurely in May, 1932, but subsequently sanded up after being officially completed June 16, was indefinitely shut in on June 23, 1932, in the interests of conservation.

The significance which attaches to the discovery of prolific production in the deep Wagonwheel, or 64 zone, as some prefer to designate the new horizon, is of far reaching importance, because there is every reason to believe that similar deep production should ultimately be discovered in other similar and more pronounced structures in the San Joaquin Basin. This is particularly true of Kettleman Hills, Lost Hills, South Belridge and other fields located along the western rim of the basin. Engineers of the Belridge Oil Co. are of the opinion that the deep well of that company produced from sands of Eocene age during the short production test conducted between June 16 and June 23, before it was shut in. It is significant to note that while practically all crude oil production in California is derived from the younger Miocene and Pliocene ages of the Tertiary, the deep zone discovery of the Belridge Oil Co. indicates the possibility that deeper drilling in other fields will ultimately lead to the discovery of additional production below present established limits.

The Associated Oil Co. established a new deep record for commercial production last year by finishing No. 83 Lloyd in the Ventura Avenue Field flowing 5,245 bbls. of clean 31.7 gravity oil and 4,100,000 feet of natural gas per day from 9,700 feet on July 12, 1932. The importance which attaches to this deep zone exploration work lies in the fact that the bit was still in the Pliocene when drilling operations were concluded. In as much as the Miocene has not yet been encountered in the prolific Ventura Avenue Field, it is logical to assume that there are still several hundred feet of potentially productive formation below the bottom of the present deepest well, which is 9,700 feet. Ventura Avenue has a greater thickness of continuous oil sand than any other field discovered in California up to the present. It is quite likely, provided normal development continues, that commercial production will be developed in the Ventura Avenue Field below the 10,000-foot level before the end of 1933.

### San Miguelito

The discovery of a new deep zone in the San Miguelito Field of Ventura County by the Continental Oil Co. on August 10, 1932, was of considerable importance as it removed this field from the secondary group of fields and placed it in the primary group along with Elwood, Ventura Avenue, Dominguez and Kettleman Hills. The limits of production have not yet been defined at San Miguelito but reconnaissance work indicates the probability that the field will be relatively limited in areal extent. The first well drilled in the San Miguelito Field was the Chanslor-Canfield Midway Oil Co.'s No. 2-A Hobson, which only showed an initial daily production of 150 bbls. This well drilled through the San Miguelito fault zone and is reliably reported to have deviated approximately 1,500 feet from the vertical. If it had not been for this abnormal inclination, the

PRODUCTION OF CRUDE BY MONTHS—CALIFORNIA OIL DISTRICTS
(Barrels of 42 U. S. gallons)

| Month— | 1932 Total bbls. | 1932 Daily average | 1931 Total bbls. | 1931 Daily average |
|---|---|---|---|---|
| January | 15,532,141 | 501,037 | 16,485,738 | 531,798 |
| February | 14,616,862 | 504,030 | 14,930,932 | 533,248 |
| March | 15,575,915 | 502,449 | 16,364,842 | 527,898 |
| April | 15,524,444 | 517,481 | 15,803,541 | 526,785 |
| May | 15,575,741 | 502,443 | 16,448,960 | 530,612 |
| June | 14,118,970 | 470,632 | 15,641,436 | 521,381 |
| Total first half | 90,944,073 | 499,679 | 95,675,449 | 528,594 |
| July | 14,627,550 | 471,856 | 16,093,322 | 519,139 |
| August | 14,839,951 | 478,708 | 15,668,984 | 505,451 |
| September | 14,351,140 | 478,371 | 15,180,610 | 506,020 |
| October | 14,627,663 | 471,860 | 15,651,983 | 504,903 |
| November | 14,142,389 | 471,413 | 14,997,700 | 499,923 |
| December | 14,595,028 | 470,807 | 15,560,984 | 501,967 |
| Total last half | 87,183,721 | 473,825 | 93,153,503 | 506,269 |
| Total year | 178,127,794 | 486,688 | 188,829,032 | 517,340 |

TOTAL FLUID STOCKS OF PETROLEUM HELD IN PACIFIC COAST TERRITORY
(Barrels)

| 1932— | Heavy crude and fuel | Refinable crude | Gasoline | Naphtha distillates | All other stocks | Total all stocks |
|---|---|---|---|---|---|---|
| January 31 | 98,914,561 | 42,302,110 | 16,621,657 | 4,353,539 | 8,252,187 | 170,444,054 |
| February 29 | 98,806,315 | 42,167,334 | 17,818,437 | 4,788,185 | 8,001,919 | 171,582,190 |
| March 31 | 97,992,316 | 42,154,553 | 17,646,369 | 4,809,449 | 7,886,300 | 170,488,987 |
| April 30 | 98,116,932 | 42,434,600 | 18,442,175 | 4,491,020 | 7,892,056 | 171,376,783 |
| May 31 | 98,859,851 | 42,621,571 | 17,912,003 | 4,776,867 | 7,578,669 | 171,748,961 |
| June 30 | 100,053,802 | 40,836,891 | 16,554,338 | 4,745,948 | 7,241,079 | 169,432,058 |
| July 31 | 101,230,464 | 40,297,652 | 16,523,748 | 4,860,823 | 7,579,667 | 170,492,354 |
| August 31 | 101,621,925 | 40,054,558 | 16,415,703 | 4,818,520 | 7,616,007 | 170,526,713 |
| September 30 | 101,896,450 | 40,267,673 | 15,427,816 | 4,890,334 | 7,425,949 | 169,908,222 |
| October 31 | 102,322,684 | 39,897,757 | 15,705,994 | 5,076,011 | 6,921,184 | 169,923,630 |
| November 30 | 101,822,743 | 40,147,042 | 15,153,659 | 4,935,880 | 7,046,703 | 169,106,027 |
| December 31 | 101,174,293 | 39,299,041 | 15,670,771 | 4,909,408 | 7,192,912 | 168,246,425 |

CALIFORNIA CRUDE OIL PRODUCTION, JANUARY-DECEMBER, 1932, INCLUSIVE
(Barrels of 42 U. S. gallons)

| Northern fields— | January | February | March | April | May | June | July | August | September | October | November | December | Total | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Coalinga | 226,360 | 216,330 | 269,872 | 314,097 | 328,237 | 316,315 | 342,736 | 336,163 | 314,237 | 331,806 | 322,709 | 330,716 | 3,649,578 | 9,972 |
| Elk Hills | 392,510 | 369,158 | 393,902 | 379,291 | 395,447 | 363,809 | 379,520 | 380,881 | 371,156 | 371,641 | 369,622 | 379,524 | 4,537,461 | 12,397 |
| Fruitvale | 111,545 | 111,551 | 113,061 | 120,423 | 126,449 | 124,030 | 130,595 | 151,657 | 147,145 | 143,246 | 153,832 | 157,267 | 1,600,801 | 4,374 |
| Kern River | 304,867 | 277,969 | 311,026 | 300,466 | 300,281 | 276,444 | 281,382 | 276,734 | 260,922 | 265,521 | 266,181 | 266,369 | 3,387,262 | 9,255 |
| Kettleman North Dome | 1,868,226 | 1,735,529 | 1,856,637 | 1,804,025 | 1,821,110 | 1,798,545 | 1,900,600 | 1,868,906 | 1,775,191 | 1,829,106 | 1,845,910 | 1,845,288 | 21,949,072 | 59,970 |
| Kettleman Middle Dome | ..... | ..... | ..... | 6,687 | 3,850 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10,537 | 29 |
| Lost Hills-Belridge | 301,290 | 264,704 | 286,042 | 278,340 | 277,210 | 266,190 | 265,142 | 267,065 | 256,970 | 292,230 | 272,087 | 302,714 | 3,329,984 | 9,098 |
| McKittrick | 53,740 | 52,600 | 55,646 | 56,592 | 54,449 | 54,455 | 56,360 | 57,453 | 52,750 | 54,815 | 52,018 | 50,914 | 651,792 | 1,781 |
| Midway-Sunset | 1,508,710 | 1,430,823 | 1,527,733 | 1,523,854 | 1,545,948 | 1,479,329 | 1,521,570 | 1,520,611 | 1,484,008 | 1,481,019 | 1,440,291 | 1,465,140 | 17,929,036 | 48,986 |
| Mount Poso | 253,918 | 234,814 | 247,380 | 237,759 | 241,654 | 237,008 | 248,024 | 253,470 | 232,500 | 248,680 | 239,833 | 232,799 | 2,907,839 | 7,945 |
| Round Mountain | 39,630 | 63,689 | 87,146 | 89,062 | 127,454 | 100,343 | 90,550 | 67,397 | 62,075 | 64,440 | 68,560 | 68,468 | 928,814 | 2,538 |
| Wheeler Ridge | 16,450 | 15,159 | 15,716 | 16,049 | 16,583 | 15,340 | 15,552 | 15,726 | 15,203 | 15,351 | 14,996 | 15,174 | 187,299 | 512 |
| Coastal fields— | | | | | | | | | | | | | | |
| Capitan | ..... | ..... | ..... | 3,092 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3,092 | 8 |
| Elwood | 509,331 | 486,241 | 509,275 | 506,311 | 494,712 | 418,696 | 439,918 | 430,245 | 415,924 | 426,062 | 391,214 | 413,697 | 5,441,626 | 14,868 |
| Rincon | 50,530 | 46,686 | 51,249 | 45,624 | 52,670 | 42,793 | 49,037 | 47,322 | 55,225 | 61,024 | 62,019 | 64,000 | 628,179 | 1,716 |
| San Miguelito | 10,604 | 14,311 | 14,213 | 13,275 | 14,048 | 8,287 | 3,344 | 36,747 | 40,504 | 32,687 | 32,367 | 31,860 | 252,247 | 689 |
| Santa Barbara | 9,700 | 8,422 | 9,268 | 8,113 | 8,520 | 10,378 | 15,539 | 18,177 | 14,209 | 12,758 | 19,959 | 21,403 | 156,446 | 427 |
| Santa Maria | 78,474 | 77,546 | 81,398 | 88,244 | 108,156 | 87,129 | 91,535 | 97,884 | 97,281 | 89,971 | 92,760 | 90,365 | 1,080,723 | 2,953 |
| Summerland | 3,359 | 3,508 | 3,334 | 3,208 | 3,444 | 3,333 | 3,341 | 3,526 | 3,387 | 3,191 | 2,824 | 2,931 | 39,386 | 108 |
| Ventura Avenue | 1,252,006 | 1,135,157 | 956,911 | 881,141 | 936,428 | 843,313 | 924,436 | 978,539 | 1,071,822 | 1,092,834 | 1,096,665 | 1,163,603 | 12,332,853 | 33,696 |
| Ventura-Newhall | 110,342 | 104,675 | 112,880 | 108,804 | 111,986 | 107,242 | 108,441 | 109,699 | 106,038 | 96,418 | 93,729 | 89,501 | 1,259,755 | 3,442 |
| Watsonville | 1,937 | 1,812 | 1,937 | 1,875 | 1,937 | 1,825 | 1,937 | 1,938 | 1,875 | 1,938 | 1,875 | 1,938 | 22,824 | 62 |
| Southern fields— | | | | | | | | | | | | | | |
| Coyote | 301,053 | 298,799 | 322,146 | 312,479 | 311,868 | 298,165 | 311,538 | 318,202 | 305,448 | 311,480 | 313,488 | 311,801 | 3,716,467 | 10,154 |
| Dominguez | 469,179 | 420,443 | 619,161 | 957,421 | 732,409 | 452,915 | 472,193 | 545,762 | 515,776 | 546,740 | 523,818 | 567,762 | 6,823,579 | 18,644 |
| Fullerton (Brea Olinda) | 278,651 | 256,373 | 257,968 | 249,868 | 248,440 | 247,908 | 252,943 | 249,872 | 247,852 | 242,419 | 240,544 | 245,287 | 3,018,125 | 8,246 |
| Huntington Beach | 685,875 | 643,187 | 678,999 | 668,352 | 690,965 | 622,300 | 670,678 | 687,341 | 668,717 | 639,710 | 622,602 | 737,275 | 8,016,001 | 21,902 |
| Inglewood | 426,609 | 401,684 | 425,777 | 414,374 | 424,385 | 406,005 | 425,581 | 417,961 | 398,811 | 378,532 | 367,948 | 381,668 | 4,869,335 | 13,304 |
| Lawndale | 7,283 | 8,298 | 8,812 | 9,510 | 9,307 | 10,794 | 9,669 | 9,295 | 10,562 | 8,106 | 8,409 | 9,805 | 110,350 | 301 |
| Long Beach | 2,414,539 | 2,359,686 | 2,559,780 | 2,464,350 | 2,489,393 | 2,170,852 | 2,195,969 | 2,250,465 | 2,135,960 | 2,107,244 | 2,108,653 | 2,178,662 | 27,435,553 | 74,961 |
| Los Angeles-Salt Lake | 36,128 | 35,299 | 35,845 | 33,855 | 34,607 | 32,900 | 31,763 | 32,173 | 31,020 | 31,137 | 28,968 | 30,429 | 394,124 | 1,077 |
| Montebello | 193,281 | 182,816 | 198,282 | 192,942 | 201,636 | 190,111 | 191,493 | 187,383 | 180,620 | 146,288 | 145,240 | 152,438 | 2,162,530 | 5,909 |
| Newport | 684 | 121 | 122 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 927 | 3 |
| Playa Del Rey | 625,639 | 560,284 | 567,120 | 533,211 | 543,509 | 465,171 | 467,732 | 455,536 | 421,600 | 435,429 | 412,149 | 413,556 | 5,910,926 | 16,150 |
| Potrero | 30,744 | 24,928 | 21,543 | 17,282 | 15,331 | 10,833 | 16,035 | 40,688 | 20,152 | 18,695 | 17,708 | 18,670 | 252,609 | 690 |
| Richfield | 200,233 | 178,336 | 195,377 | 194,963 | 189,550 | 190,715 | 194,184 | 192,303 | 184,871 | 184,060 | 177,579 | 181,537 | 2,263,699 | 6,185 |
| Rosecrans | 96,386 | 92,346 | 96,820 | 92,985 | 92,139 | 88,460 | 93,926 | 98,708 | 92,684 | 95,226 | 92,613 | 93,331 | 1,125,624 | 3,075 |
| Santa Fe Springs | 2,024,056 | 1,919,977 | 2,041,583 | 1,989,148 | 1,977,814 | 1,787,456 | 1,798,711 | 1,822,497 | 1,767,850 | 1,974,338 | 1,703,601 | 1,731,005 | 22,538,036 | 61,579 |
| Seal Beach | 412,163 | 374,394 | 408,014 | 377,920 | 401,834 | 372,809 | 395,242 | 381,846 | 362,391 | 371,102 | 325,171 | 339,603 | 4,522,489 | 12,357 |
| Torrance | 193,060 | 180,432 | 197,030 | 192,687 | 197,448 | 183,005 | 196,772 | 195,456 | 187,112 | 191,219 | 182,317 | 184,736 | 2,281,274 | 6,233 |
| Whittier | 33,050 | 28,775 | 36,910 | 36,765 | 34,053 | 33,767 | 33,572 | 34,323 | 32,192 | 31,200 | 32,141 | 32,792 | 399,540 | 1,092 |
| Total | 15,532,141 | 14,616,862 | 15,575,915 | 15,524,444 | 15,575,741 | 14,118,970 | 14,627,550 | 14,839,951 | 14,351,140 | 14,627,663 | 14,142,389 | 14,595,028 | 178,127,794 | 486,688 |
| Daily average 1932 | 501,037 | 504,030 | 502,449 | 517,481 | 502,443 | 470,632 | 471,856 | 478,708 | 478,371 | 471,860 | 471,413 | 470,807 | ..... | 486,688 |
| Daily average 1931 | 531,798 | 533,248 | 527,898 | 526,785 | 530,612 | 521,381 | 519,139 | 505,451 | 506,020 | 504,903 | 499,923 | 501,967 | ..... | 517,340 |
| Daily average 1930 | 709,137 | 745,916 | 635,483 | 625,625 | 614,337 | 600,693 | 606,517 | 605,499 | 599,477 | 588,518 | 603,648 | 573,765 | ..... | 624,931 |
| Daily average 1929 | 754,385 | 796,454 | 784,669 | 776,502 | 775,915 | 820,821 | 864,407 | 878,495 | 870,142 | 867,586 | 710,585 | 700,179 | ..... | 800,101 |

Chanslor-Canfield Midway Oil Co. would undoubtedly have picked up the deep Grubb zone as the hole was bottomed at 10,030 feet. Following the completion of No. 2-A Hobson, the Continental Oil Co. started work on No. 1 Grubb and successfully completed it in the upper, or Hobson zone in November, 1931. Production of the well failed to hold up satisfactorily, with the result that the Continental deepened No. 1 Grubb to 7,197 feet and, after plugging back the hole to 7,145 feet, completed it flowing 2,550 bbls. of clean 30.9 gravity oil and 1,440 feet of natural gas per day. The San Miguelito Field is located approximately midway between the Ventura Avenue and Rincon Fields and, because of its structural position on the Ventura Avenue anticline, its importance should be superior to that of Rincon but inferior to the prolific Ventura Avenue Field. The Honolulu Consolidated has one well on the Valenzuela property already headed down to the Grubb zone and the Chanslor-Canfield Midway Oil Co. will shortly spud in another well on the Hobson lease. The Continental Oil Co., in conformity with lease requirements, will be obliged to start a second test on the Grubb lease before the close of February, unless an extension of time can be secured.

### Deepest Dry Hole

The Western Gulf Oil Co., discoverer of the Fruitvale Field of Kern County, exceeded California's deep drilling record when it reached a depth of 10,294 feet in No. 1 Bradley, a wildcat located in the Santa Maria district of Santa Barbara County. This is the deepest hole to be drilled in the United States up to the present time but is somewhat shallower than the Pen-Mex Oil Co.'s deep hole in Mexico. No. 1 Bradley was abandoned primarily because of mechanical trouble and was a rotary job from top to bottom. Two wells in California may establish new drilling depths during the next year or so, unless commercial production is developed in the meantime. One of these projected deep tests is the North Kettleman Oil & Gas Co.'s No. 1 Lillis-Welsh in the extreme western end of the Kettleman North Dome Field. This well is down 9,932 feet at the present time with a string of 7-inch casing cemented at 9,650 feet. It is the present intention to carry this hole down to approximately 11,000 feet, unless production is developed sooner. In the Lost Hills Field of Kern County, the Associated has installed the heaviest equipment possible in No. 1 Williamson, a deep test which is being drilled in conjunction with the Richfield Oil Co. This well will likewise be drilled to approximately 11,000 feet unless commercial production is developed in the meantime or geological conditions prove unfavorable before the attainment of this goal.

### Curtailment Work

Due to lower consumption in Pacific Coast territory and decreased shipments of crude and refined oils to foreign and domestic ports, the allowable daily production of California was revised several times during 1932. From January 1 to May 22, 1932, California's maximum allowable daily production was 456,700 bbls. From May 23 to July 31 the State's quota was increased to 476,200 bbls. per day. During August, 1932, the allowable was reduced to 475,600 bbls. per day but increased again during the month of September to 475,800 bbls. Due to a consistent diminishing demand, the allowable daily production was reduced to 440,000 bbls. per day during October, November and December, 1932. With the exception of a few days during the year, California operators failed to limit production to the established allowable, with the result that crude oil production was consistently in excess of economic limitations. A crisis was reached during October. The executive committee, in an effort to determine the effectiveness of curtailment, ordered the umpire to conduct open flow tests at Long Beach, Playa Del Rey, Huntington Beach and Santa Fe Springs. Flow tests were accordingly conducted at Playa Del Rey and Santa Fe Springs, but the projected tests for Huntington Beach and Long Beach were canceled because operators in the other two fields failed to make up the excess production chalked up during the 10-day flow tests. These flow tests were ordered to determine the effectiveness of curtailment but the umpire stipulated that operators exceeding their allowable would be expected to offset within 30 days any excess production made during the flow tests involved. During these flow tests it was found that only five or six operators in the Playa Del Rey Field were actually curtailing production. Santa Fe Springs, on the other hand, exceeded its rated potential, due principally to the major companies, all but one of which were maintaining curtailment in excess of requirements. Kettleman Hills consistently increased its potential daily production during the year and consequently showed the greatest amount of curtailment both from a quantity and percentage standpoint. Neal H. Anderson was succeeded by J. R. Pemberton as California umpire on August 1, 1932.

### Mergers

The outstanding merger in California during 1932 was the acquisition of the Rio Grande Oil Co. by the Consolidated Oil Corp., a Sinclair Prairie consolidation. In acquiring the Rio Grande, the Consolidated secured a refinery at Vinvale, Calif., and a 50 per cent undivided interest in the properties of the Barnsdall Oil Co. at Elwood. In addition the Rio Grande has production of crude oil and natural gasoline at Long Beach, Midway-Sunset and other smaller fields. Included in the transaction was the Rio Grande's market outlet, principally in southern California, and the necessary pipe line facilities incident to the transportation of crude oil. The status of the Richfield Oil Co. remained unchanged during 1932, although the Consolidated Oil Corp. and the Standard Oil Co. of California both entered bids for possession of this company, which was thrown into receivership in December, 1930. The Consolidated Oil Corp. is reliably reported to have decided to withdraw its attempt to secure control of Richfield and this action leaves the Standard Oil Co. as the highest bidder at the present time. The company was still in receivership at the close of 1932 and appears destined to remain in status quo for some time to come as creditors do not seem able to agree on an equitable distribution of assets. The only other transaction of special consequence in California in 1932 was the sale of the Getty Oil Co.'s holdings in the North Dome of Kettleman Hills. This property, which in reality was a percentage interest in the Kettleman North Dome Association, was split two ways, the Shell and Union each acquiring 50 per cent of the interest in question.

### Kettleman Hills

Development work in the North Dome of Kettleman Hills was characterized by orderly drilling and freedom from competitive work of any kind. The allowable daily production of the field was 60,000 bbls. per day for the first nine months of the year and 54,000 bbls. per day during October, November and December. During the first period operators in the field strictly adhered to the maximum allowable of 60,000 bbls. per day but failed to reduce production to the established quota during October, November and December, due primarily to the refusal of the Kettleman North Dome Association to acquiesce to the additional curtailment of 10 per cent. During the year several dry holes were drilled around the edge of the field and while real limits appear to be well defined at several points, this is only true as far as Temblor production is concerned. Kreyenhagen production may ultimately be developed outside of what now appears to be the outer limits of production. One of the most important developments in the North Dome from a drilling standpoint was the correction of the fallacious theory that the Whepley shale marked the bottom of the Temblor. The Kettleman North Dome Association disproved this theory, based on what appeared to be conclusive evidence, by producing a well below the Whepley shale. As an evidence of progressive drilling, it might not be amiss to call attention to the fact that operators attained greater efficiency in the drilling of new wells at Kettleman Hills during the year. Drilling costs, which at the outset of development approximated $250,000, have been substantially reduced simultaneous with a reduction in drilling time. The Union Oil Co.'s last completion in the North Dome was drilled in 121 days at a cost reported to be below $100,000. During 1931 the average cost approximated $200,000 and the drilling time from six to eight months. The Middle Dome of Kettleman Hills did not show up as a field of major importance during 1932 due to mechanical trouble which prevented production from No. 1 Burbank of the Petroleum Securities and No. 6-29 V of the Standard. Preliminary production tests conducted on both of these wells indicated the existence of a substantial accumulation, however, and this will probably be verified before the close of the current year. The Petroleum Securities has suspended drilling operations on No. 1 Burbank due to mechanical trouble of a complicated nature but the Standard Oil Co. is making

CALIFORNIA FIELD OPERATIONS BY MONTHS FOR YEAR 1932

| 1932— | Wells completed— Number | Bbls. daily | Wells— Drilling | Producing | Abandoned— Drillers | Producers | New rigs |
|---|---|---|---|---|---|---|---|
| January | 16 | 8,789 | 124 | 8,727 | 20 | 19 | 15 |
| February | 11 | 5,921 | 125 | 8,900 | 17 | 8 | 20 |
| March | 16 | 2,788 | 126 | 9,018 | 28 | 10 | 19 |
| April | 24 | 26,038 | 117 | 9,118 | 14 | 12 | 25 |
| May | 11 | 4,113 | 120 | 9,066 | 11 | 6 | 17 |
| June | 17 | 15,586 | 108 | 8,912 | 24 | 29 | 16 |
| July | 17 | 24,471 | 101 | 8,949 | 19 | 10 | 15 |
| August | 12 | 21,648 | 105 | 8,874 | 16 | 23 | 14 |
| September | 16 | 5,393 | 100 | 8,816 | 12 | 8 | 18 |
| October | 12 | 4,576 | 93 | 8,903 | 17 | 6 | 12 |
| November | 19 | 28,379 | 87 | 8,946 | 5 | 23 | 23 |
| December | 13 | 9,121 | 82 | 8,901 | 8 | 18 | 25 |
| Total 1932 | 184 | 156,823 | ... | ..... | 191 | 172 | 219 |
| Total 1931 | 246 | 364,434 | ... | ..... | 238 | 177 | 259 |
| Total 1930 | 755 | 584,521 | ... | ..... | 254 | 320 | 964 |
| Total 1924 | 910 | 1,307,496 | ... | ..... | 314 | 212 | 1,306 |
| Total 1928 | 712 | 681,629 | ... | ..... | 191 | 321 | 1,290 |
| Total 1927 | 901 | 479,905 | ... | ..... | 281 | 252 | 1,160 |
| Total 1926 | 913 | 391,620 | ... | ..... | 284 | 200 | 1,138 |
| Total 1925 | 948 | 506,969 | ... | ..... | 338 | 141 | 1,262 |
| Total 1924 | 1,238 | 508,944 | ... | ..... | 336 | 251 | 1,240 |
| Total 1923 | 980 | 1,376,279 | ... | ..... | 293 | | 1,327 |
| Total 1922 | 801 | 524,397 | ... | ..... | 204 | | 1,370 |
| Total 1921 | 684 | 187,567 | ... | ..... | 162 | | 1,082 |
| Total 1920 | 587 | 169,500 | ... | ..... | 159 | | 925 |
| Monthly average 1932 | 15 | 13,069 | 108 | 8,929 | 16 | 14 | 18 |
| Monthly average 1931 | 21 | 30,370 | 207 | 8,911 | 20 | 15 | 22 |
| Monthly average 1930 | 63 | 48,710 | 434 | 9,632 | 21 | 27 | 80 |
| Monthly average 1929 | 76 | 100,625 | 610 | 10,550 | 26 | 18 | 109 |
| Monthly average 1928 | 59 | 56,802 | 512 | 10,823 | 16 | 27 | 108 |
| Monthly average 1927 | 75 | 39,992 | 404 | 11,276 | 23 | 21 | 97 |
| Monthly average 1926 | 76 | 32,635 | 422 | 11,288 | 24 | 17 | 95 |
| Monthly average 1925 | 79 | 42,247 | 417 | 11,393 | 28 | 12 | 105 |
| Monthly average 1924 | 103 | 42,412 | 510 | 10,903 | 28 | 21 | 103 |
| Monthly average 1923 | 82 | 114,690 | 759 | 8,928 | | 24 | 111 |
| Monthly average 1922 | 67 | 43,700 | 605 | 9,410 | | 17 | 115 |
| Monthly average 1921 | 57 | 15,631 | 536 | 9,425 | | 14 | 96 |
| Monthly average 1920 | 49 | 14,125 | 403 | 9,299 | | 13 | 77 |

CALIFORNIA FIELD OPERATIONS BY DISTRICTS FOR YEAR 1932

| Northern districts— | Wells completed— Number | Bbls. daily | Oil and gas wells*— Drilling | Producing | Abandoned— Drillers | Producers | New rigs |
|---|---|---|---|---|---|---|---|
| Coalinga | 1 | 10 | ... | 646 | ... | 5 | ..... |
| Elk Hills | ..... | ..... | ... | 197 | ... | 2 | ..... |
| Fruitvale | 32 | 13,071 | 5 | 37 | 2 | 1 | 34 |
| Kern River | 2 | 350 | .. | 931 | 2 | 1 | 2 |
| Kettleman North Dome | 14 | 78,181 | 11 | 27 | 5 | ... | 14 |
| Kettleman Middle Dome | 1 | 1,245 | 1 | ..... | 1 | ... | 1 |
| Lost Hills-Belridge | 4 | 10,358 | 1 | 157 | ... | ... | 1 |
| McKittrick | 1 | 80 | 2 | 114 | ... | ... | 2 |
| Midway-Sunset | 5 | 681 | 1 | 1,770 | 2 | 15 | 5 |
| Mount Poso | 4 | 633 | 1 | 84 | 4 | ... | 7 |
| Round Mountain | 9 | 2,393 | 1 | 15 | 1 | ... | 3 |
| Wheeler Ridge | ... | ..... | ... | 24 | ... | ... | ... |
| Coastal districts— | | | | | | | |
| Capitan | 1 | 25 | ... | ... | ... | ... | ... |
| Elwood | 4 | 2,513 | 1 | 37 | ... | ... | 4 |
| Rincon | 1 | 250 | 1 | 33 | ... | ... | ... |
| San Miguelito | ... | ..... | 1 | 2 | ... | ... | 2 |
| Santa Barbara | 6 | 1,434 | 1 | 5 | ... | ... | 4 |
| Santa Maria | 2 | 297 | 1 | 170 | 2 | ... | 4 |
| Summerland | ... | ..... | ... | 62 | ... | ... | ... |
| Ventura Avenue | 9 | 11,853 | 6 | 139 | 2 | ... | 8 |
| Ventura-Newhall | 4 | 184 | 6 | 432 | 19 | ... | 13 |
| Watsonville | ... | ..... | ... | 6 | ... | ... | ... |
| Southern districts— | | | | | | | |
| Coyote | 7 | 6,584 | 2 | 127 | ... | 15 | 4 |
| Dominguez | 8 | 12,866 | 3 | 52 | ... | ... | 8 |
| Fullerton | 2 | 175 | 1 | 354 | ... | ... | ... |
| Huntington Beach | 1 | 100 | 1 | 370 | 6 | 14 | ... |
| Inglewood | 3 | 435 | 2 | 216 | ... | ... | 3 |
| Lawndale | ... | ..... | ... | 6 | ... | ... | ... |
| Long Beach | 29 | 5,031 | 7 | 945 | 28 | 22 | 27 |
| Los Angeles-Salt Lake | ... | ..... | ... | 248 | ... | 43 | ... |
| Montebello | ... | ..... | . | 171 | ... | 7 | 1 |
| Newport | ... | ..... | ... | 1 | 1 | ... | ... |
| Playa Del Rey | 6 | 2,440 | 1 | 188 | 12 | 7 | 4 |
| Potrero | 1 | 975 | 2 | 12 | 2 | 2 | 1 |
| Richfield | 1 | 105 | ... | 150 | ... | 3 | ... |
| Rosecrans | ... | ..... | 1 | 65 | 3 | 5 | 1 |
| Santa Fe Springs | 1 | 65 | ... | 494 | 1 | 16 | 1 |
| Seal Beach | 4 | 4,384 | 1 | 106 | ... | 7 | 4 |
| Torrance | 3 | 105 | .. | 372 | ... | 6 | 1 |
| Whittier | ... | ..... | ... | 152 | ... | ... | ... |
| Miscellaneous drilling | ... | ..... | 43 | ..... | 90 | ... | 30 |
| Gas fields— | | | | | | | |
| Buttonwillow | 15 | Gas | 2 | 1 | 3 | ... | 14 |
| Dudley Ridge | 1 | Gas | 2 | ..... | ... | ... | 6 |
| Goleta | 1 | Gas | ... | ..... | 5 | ... | 1 |
| Total | 184 | 156,823 | 108 | 8,928 | 191 | 172 | 219 |

*Monthly average.

CALIFORNIA POTENTIAL DAILY PRODUCTION IN 1932

| 1932— | Marketable daily production | No. of wells producing | Curtailed— Daily production | No. of wells | Total potential— Daily production | No. of wells |
|---|---|---|---|---|---|---|
| January | 501,037 | 8,727 | 420,248 | 6,570 | 921,285 | 15,297 |
| February | 504,030 | 8,900 | 397,798 | 6,494 | 901,828 | 15,394 |
| March | 502,449 | 9,018 | 392,615 | 6,382 | 895,064 | 15,400 |
| April | 517,481 | 9,118 | 381,023 | 6,306 | 898,504 | 15,424 |
| May | 502,443 | 9,066 | 371,398 | 6,347 | 873,841 | 15,413 |
| June | 470,632 | 8,912 | 388,198 | 6,490 | 858,830 | 15,402 |
| July | 471,856 | 8,949 | 392,693 | 6,496 | 864,549 | 15,445 |
| August | 478,708 | 8,874 | 424,213 | 6,579 | 902,921 | 15,453 |
| September | 478,371 | 8,816 | 420,788 | 6,580 | 899,159 | 15,396 |
| October | 471,860 | 8,903 | 415,728 | 6,581 | 887,588 | 15,484 |
| November | 471,413 | 8,946 | 416,918 | 6,514 | 888,331 | 15,460 |
| December | 470,807 | 8,901 | 416,623 | 6,545 | 887,430 | 15,446 |
| Daily average | 486,688 | 8,928 | 407,847 | 6,490 | 894,535 | 15,418 |

considerable progress in reconditioning well No. 6-29 V, which, like No. 1 Burbank, has been held up for several months with mechanical trouble. In the Standard's well in the Middle Dome the upper 275 feet of Temblor yielded an initial of 1,250 bbls. of 48.2 gravity oil and approximately 35,000,000 feet of natural gas per day on a preliminary production test at 7,825 feet. This well was subsequently deepened to 8,406 feet and again tested out June 3, 1932, at which time it showed an initial of 850 bbls. of oil, 1,500 bbls. of water and 25,000,000 feet of natural gas per day. Mechanical trouble prevented the Standard from conducting a conclusive test, but with the hole reconditioned and the water excluded the company's well No. 6-29 V should show commercial production. It is logical to assume in view of the present status of development that the Middle Dome of Kettleman Hills will be definitely proven as a field of primary importance during 1933.

### Buttonwillow

The Milham Exploration Co., discoverer of the Kettleman Hills and Buttonwillow Fields of California, conducted a conservative but aggressive development program in the latter field during 1932 and finished 15 gas wells during the period in question. No oil has been found in the Buttonwillow gas field up to the present and, while subsequent drilling may ultimately show an accumulation, no oil is anticipated above the 9,000-foot level. Due to this extreme depth it is quite likely that the Milham interests will postpone oil exploration for several years. Milham has completed 21 gas wells at Buttonwillow since discovery of the field in 1927 and present plans contemplate additional exploration during 1933. Three productive gas zones have been found in the Buttonwillow gas field up to the present and engineers of the Milham expect to find several more between the 3,200-foot and 5,000-foot level. This theory will probably be tested out some time during 1933. The first gas zone is topped at approximately 2,400 feet and consists of 60 feet of loose sand. The second productive horizon is picked up at 2,500 feet and consists of about 200 feet of sandy shale. The third gas zone is encountered at 3,050 feet and consists of 200 feet of sandy shale. Shut-in pressures are relatively uniform in each zone, the first horizon showing 925 pounds, the second 1,000 pounds and the third 1,250 pounds. Buttonwillow would probably show a potential production of 350,000,000 feet of dry gas per day on a limited open flow test and a consistent operating potential of 200,000,000 feet per day at present. The Milham holds leases on 850 acres of potentially productive land at Buttonwillow and is developing 750 acres more for the Southern Pacific Land Co. In addition to this 1,600 acres, the General Petroleum has a lease on the Morris property in Section 6-28-23, on which it has finished two gas wells. The first indication of a substantial accumulation of natural gas at Buttonwillow was noted when a wildcat of the Milham blew in unexpectedly in November, 1926, and ran wild for several days before sanding up. The first successful gas producer was completed at Buttonwillow on August 4, 1927, but with the exception of a very brief period, the field has not yet been on commercial production. These gas wells, unlike oil wells which are swabbed in, are blown in by introducing gas between the tubing and casing with the tubing open.

### Long Beach Heads List

Long Beach headed the production list during 1932, followed by Santa Fe Springs, Kettleman North Dome, Midway-Sunset and Ventura Avenue in the order named. Kettleman Hills, however, was the only one of this group of primary fields to register increased production over the previous year notwithstanding that the field's production was severely curtailed. As a matter of fact, Kettleman Hills is capable of producing more oil than the combined output of any other three fields in the State at the present time. Production of Ventura Avenue during 1932 was substantially lower than the field's output during the preceding year. This decline in production reflects an abnormal condition and can be attributed to commendable action on the part of operators involved with respect to curtailment. During the summer of 1932, Ventura Avenue operators arbitrarily reduced production of crude oil in order to prevent gas waste and continued for several months to produce at a rate substantially below the quota assigned the field by the curtailment committee. In con[illegible] this policy, we find practically no curtailment in the Playa Del Rey Field and, with the exception of the major companies and a few progressive independent operators, very little honest restriction of production in the Long Beach and Huntington Beach Fields.

Kettleman Hills Middle Dome showed up for the first time in production reports this year with a production of 6,687 bbls. in April and 3,850 bbls. in May. This oil was produced during preliminary production tests by the Standard Oil Co. to determine the status of its well No. 6-29 V, which, by the way, is still hung up with mechanical trouble. The Lost Hills-Belridge Field, reflecting the completion of several big wells in the lower zone, showed a little larger production this year, although the gain in no way indicates what the field could have done under competitive conditions. It has been the practice of operators in this field to shut in wells immediately subsequent to completion or bean them back to only a fractional part of their potential in order to increase the effectivness of curtailment. The Elwood and Playa Del Rey Fields showed tremendous declines in production during the past year and in their present state appear to have reached the settled stage. Elwood, however, will be heard from again at some future date as this field has an undeveloped zone which is being held in restraint. In order to stabilize production and thus prevent price reactions as far as possible, operators in the Elwood Field entered into a gentlemen's agreement to refrain from development of the Sespe until conditions improve. This agreement has been strictly adhered to and will probably prevail for some time to come. Playa Del Rey, unlike Elwood, does not have any undeveloped zones and will consequently become of less importance as time goes on. The Ohio and Unoin still have some undeveloped acreage but since neither is rushing work this field will probably be rather inactive during the coming 12 months.

## Michigan Fields

(Continued from Page 45)

34, Pentwater Township, same county at around 500 feet.

In Clare County, Ira Scheifley, trustee, is drilling around 1,200 feet at a test on the All-American Fur farm, SE SW SE Section 21, Summerfield Township, and the Strange Oil & Gas Co. has set its drive pipe at 450 feet in a test on the J. L. Littlefield farm, in SE SW SW Section 9, Surry Township, same county.

### New Drilling Permits

Permit No. 1,429, issued to Edward Stewart and others for No. 5, 990 feet from the south line and 330 feet from the west line of the John Opperman and others farm, NW SW SE Section 12, Greendale Township, Midland County; No. 1,430, issued to the Columbia Oil & Gas Co. for No. 1, 330 feet from the north and east lines of the W. Traverse farm, NE NE SE, Section 32, same township; No. 1,431, issued to T. K. Buzzard for a test 990 feet from the south and west lines of the Frank A. Prout and others farm, NE SW SW, Section 7, Denver Township, Isabella County; No. 1,432, issued to the Theodore Oil Co. for 2, 330 feet from the south line and 990 feet from the west line of the Adrian Steed farm, SE SW NW Section 9, Greendale Township, Midland County; No. 1,433, issued to Felton, Flarida and associates for a test 330 feet from the north line and 990 feet from the west line of the James P. Moffett farm, NE NW SE Section 14, Greendale Township, Midland County.

# California's 1932 Motor Fuel Shipments to East Coast Were Greatly Reduced

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

With major eastern refining and distributing companies actively carrying forward a program of market stabilization during the greater part of 1932, intercoastal movement of gasoline from California fell off sharply, and the year's shipments were the smallest on record in recent years. A comparison of shipments of California gasoline to Atlantic and Gulf Coast ports (almost entirely the former) during the past five years, by quarters, follows:

| | Barrels of 42 U. S. gallons | | | | |
|---|---|---|---|---|---|
| | 1932 | 1931 | 1930 | 1929 | 1928 |
| First quarter | 1,916,000 | 4,403,000 | 4,698,000 | 4,827,000 | 2,397,000 |
| Second quarter | 2,244,000 | 3,808,000 | 4,091,000 | 4,700,000 | 4,314,000 |
| Third quarter | 2,537,000 | 3,195,000 | 6,892,000 | 5,411,000 | 2,953,000 |
| Fourth quarter | 2,053,000 | 3,129,000 | 4,208,000 | 6,419,000 | 5,294,000 |
| Total, year | 8,750,000 | 14,535,000 | 19,889,000 | 21,357,000 | 14,958,000 |

There were a number of factors contributing to the drop in California shipments eastward, aside from the policy of stabilization in the East, through the medium of reduced refinery output and curtailed intercompany movements from California and the Gulf. The most interesting of these, perhaps, is seen in the fact that as a result of numerous improvements in refinery equipment at East Coast plants, refiners in this area are now turning out a better gasoline, from the standpoint of antiknock quality, than ever before. Previously, some of these interests had been using large quantities of California gasoline for their featured brands, the natural antiknock qualities of the Pacific Coast product being an important consideration. The drop in consumption on the Atlantic seaboard was another reason for a lessening in California shipments, while the generally steady market in California throughout the year, with the resultant absence of distressed cargoes from the open market, likewise contributed to the drop in intercoastal movement.

### Outlook for 1933

With imports of gasoline virtually at an end and the statistical position of the market in this area improved, the outlook for 1933 indicates a broader movement of California gasoline to the eastern seaboard, although while cheap East Texas crude continues available this movement is expected to continue limited. California refiners are still holding larger gasoline stocks than refiners in any other of the major producing areas. A comparison of total motor fuel stocks at principal refining areas as of December 31 follows:

| | Bbls. of 42 gals. |
|---|---|
| East Coast | 13,683,000 |
| Appalachian | 1,809,000 |
| Indiana, Illinois, Kentucky | 6,962,000 |
| Oklahoma, Kansas, Missouri | 4,845,000 |
| Inland Texas | 1,544,000 |
| Texas Gulf | 6,046,000 |
| Louisiana Gulf | 1,393,000 |
| North Louisiana-Arkansas | 304,000 |
| Rocky Mountain | 1,142,000 |
| California | 15,610,000 |
| Total | 52,339,000 |

With an oil import duty looming on the horizon, importing companies brought in considerable quantities of gasoline from Mexico and South America, principally the latter, during the first six months of 1932, and this tended to narrow the market for California gasoline in the East.

Along with the increased import movement of motor fuel, shipments of gasoline from East Texas refineries into Atlantic seaboard territory showed a sharp increase during 1932, and this likewise tended to further restrict the demand for the California product in this territory. As the new year gets under way, competition from East Texas continues a formidable opponent to the immediate extension of California gasoline sales in this area.

Although California gasoline shipments to the East during the past year largely represented intercompany movement, a number of cargoes were sold by a major California refiner to a large independent company operating in the northern seaboard area, and several other California cargoes came to independents. The Pacific Coast product was a particularly strong factor in the New England market.

So far as Gulf Coast markets were concerned, shipments of California gasoline last year were negligible. Not only was the Pacific Coast product virtually shut out of the Gulf Coast area, but Gulf sellers for the first time invaded the Pacific Coast market, booking several cargoes for shipment into the Northwest in competition with California refiners. In addition, sellers at the Gulf, under the stimulus of plentiful supplies from East Texas, were consistently underselling California refiners in export markets.

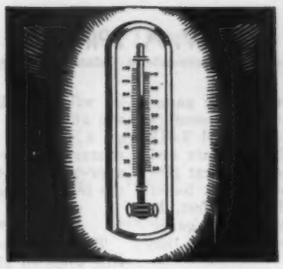
An interesting development in the intercoastal movement was the marked increase in shipments of California gas and furnace oils to the Atlantic seaboard, and, during the closing quarter, the movement of several cargoes of California kerosene to Atlantic Coast ports, where an abnormally heavy demand had caught eastern refiners with inadequate stocks.

Reports in market circles here indicate that a number of cargoes of California gasoline and furnace oil have been booked for 1933 delivery by independent marketing interests, and it is indicated that the gallonage of the Pacific Coast product to be handled by independents in the East this year will be substantially larger than the volume booked during the past year.

Comparative data on California shipments to Atlantic and Gulf Coast ports, by weeks, for the past four years follow:

CALIFORNIA GASOLINE SHIPMENTS TO ATLANTIC AND GULF COAST PORTS
(Barrels of 42 gallons)

| Week ended— | 1932 | 1931 | 1930 | 1929 |
|---|---|---|---|---|
| Jan. 2 | 561,000 | 338,000 | 83,000 | 239,000 |
| Jan. 9 | 222,000 | 646,000 | 447,000 | 397,000 |
| Jan. 16 | 95,000 | 334,000 | 575,000 | 418,000 |
| Jan. 23 | 393,000 | 154,000 | 535,000 | 294,000 |
| Jan. 30 | 120,000 | 488,000 | 398,000 | 68,000 |
| Feb. 6 | 25,000 | 267,000 | 379,000 | 654,000 |
| Feb. 13 | 57,000 | 165,000 | 612,000 | 445,000 |
| Feb. 20 | 182,000 | 311,000 | 117,000 | 80,000 |
| Fe[illegible]. 27 | 31,000 | 198,000 | 105,000 | 517,000 |
| Mar. 5 | ..... | 390,000 | 178,000 | 287,000 |
| Mar. 12 | 113,000 | 388,000 | 470,000 | 225,000 |
| Mar. 19 | 67,000 | 220,000 | 360,000 | 667,000 |
| Mar. 26 | ..... | 454,000 | 439,000 | 536,000 |
| Apr. 2 | ..... | 487,000 | 197,000 | 242,000 |
| Apr. 9 | 435,000 | 192,000 | 176,000 | 173,000 |
| Apr. 16 | 160,000 | 196,000 | 195,000 | 355,000 |
| Apr. 23 | 211,000 | 496,000 | 392,000 | 405,000 |
| Apr. 30 | ..... | 292,000 | 272,000 | 362,000 |
| May 7 | 43,000 | 212,000 | 262,000 | 374,000 |
| May 14 | 117,000 | 544,000 | 455,000 | 537,000 |
| May 21 | 232,000 | 306,000 | 387,000 | 414,000 |
| May 28 | 283,000 | 142,000 | 180,000 | 312,000 |
| June 4 | 222,000 | 438,000 | 274,000 | 161,000 |
| June 11 | 225,000 | 179,000 | 368,000 | 387,000 |
| June 18 | ..... | 173,000 | 445,000 | 595,000 |
| June 25 | 315,000 | 148,000 | 386,000 | 381,000 |
| July 2 | 193,000 | 301,000 | 699,000 | 610,000 |
| July 9 | 384,000 | 496,000 | 451,000 | 382,000 |
| July 16 | 543,000 | 313,000 | 1,689,000 | 159,000 |
| July 23 | 190,000 | 97,000 | 443,000 | 328,000 |
| July 30 | ..... | 530,000 | 686,000 | 821,000 |
| Aug. 6 | ..... | 30,000 | 506,000 | 349,000 |
| Aug. 13 | 345,000 | 115,000 | 399,000 | 269,000 |
| Aug. 20 | 375,000 | 279,000 | 423,000 | 417,000 |
| Aug. 27 | ..... | 409,000 | 512,000 | 529,000 |
| Sept. 3 | 196,000 | 35,000 | 602,000 | 260,000 |
| Sept. 10 | ..... | 208,000 | 364,000 | 395,000 |
| Sept. 17 | 116,000 | 246,000 | 216,000 | 690,000 |
| Sept. 24 | 190,000 | 136,000 | 498,000 | 217,000 |
| Oct. 1 | 237,000 | 262,000 | 207,000 | 233,000 |
| Oct. 8 | 147,000 | 332,000 | 308,000 | 441,000 |
| Oct. 15 | 189,000 | 551,000 | 542,000 | 623,000 |
| Oct. 22 | 288,000 | 146,000 | 476,000 | 503,000 |
| Oct. 29 | 118,000 | 97,000 | 81,000 | 341,000 |
| Nov. 5 | 117,000 | 351,000 | 606,000 | 712,000 |
| Nov. 12 | 117,000 | 322,000 | 166,000 | 443,000 |
| Nov. 19 | 85,000 | ..... | 544,000 | 440,000 |
| Nov. 26 | 108,000 | 323,000 | 347,000 | 498,000 |
| Dec. 3 | 285,000 | 202,000 | 405,000 | 685,000 |
| Dec. 10 | 73,000 | 302,000 | 348,000 | 349,000 |
| Dec. 17 | 80,000 | 114,000 | 115,000 | 552,000 |
| Dec. 24 | 209,000 | 170,000 | 64,000 | 599,000 |
| Dec. 31 | ..... | ..... | ..... | ..... |



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The pipe is wrapped at the mill. Weather conditions are uniform. Great, skilfully designed machines apply coating and wrapping at a scientifically regulated temperature. The inexactness of human handling is eliminated. Labor costs are reduced. 5000 miles (over 15,000 carloads) of Hill-Hubbell mill-coated and wrapped pipe have been laid successfully by the largest gas and oil companies in the United States. These companies have found that Hill-Hubbell protected pipe not only eliminates the wastefulness and incompleteness of field-wrapped pipe, but actually increases the speed and lowers the expense of installation.

The Hill-Hubbell patented system of loading, protecting every joint, keeps pipe in perfect condition during unloading and installation.

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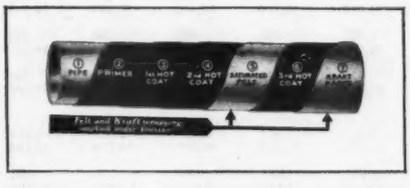


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Plants for coating and wrapping by the Hill-Hubbell Process are located for the production of the pipe manufacturers listed:

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JONES & LAUGHLIN STEEL CORP.
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# Ten Pools Were Opened in Oklahoma in 1932; Two Were Regarded as of Major Importance

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

During 1932, 10 new pools were discovered in Oklahoma, two of which are considered of major importance. Pools in the order of their discovery were opened in Kay, Okmulgee, Hughes, Pottawatomie, Lincoln, Osage, Noble, Creek and Jefferson Counties. The two pools of probable major importance were the Wentz Pool, in Noble County and the West Holdenville Field in Hughes County.

In July, Wentz Oil Corp. and others' No. 1 Community, C SE NW Section 17-20-2w, Noble County, was started. It was located on a block of 2,160 acres of leases. Companies joining in the unit operation included Shell Petroleum Corp., Gypsy Oil Co., Carter Oil Co., Sinclair Prairie Oil Co., L. H. Wentz, Twin State Oil Co., Empire Oil & Refining Co., and Phillips Petroleum Co.

The Wentz Community well found oil in the Wilcox sand late in September, and created more attention than has any other well in the State since the discovery of the Oklahoma City Field about four years ago. Its first 24-hour gauge justified the confidence of the operators in drilling the well, as it gauged 1,817 bbls. of 42 gravity oil in 24 hours and then made 411 bbls. of oil the next five hours. The large flow of oil was found in the Wilcox sand at 5,193-97 feet. It was shut in after making its initial gauge until the owners could secure a pipe line connection.

Particular significance was attached to this well as it was the most important completion of the year, and it opened an area that had heretofore been without deep exploration.

The well was drilled deeper to a total of 5,262 feet where it found a showing of water that bailed about a half barrel an hour. The owners then plugged back to a total depth of 5,225 feet and took a 10-day production gauge, the well making approximately 22,000 bbls., averaging about 1,100 bbls. a day for the 10-day period.

Under the present state proration law all wildcat wells completed in the State are allowed to produce only 50 bbls. of oil a day and in order to make up the average this well may remain shut in for approximately 400 days from the period the test was made.

### West Holdenville Discovery

The development of the West Holdenville Pool, in Hughes County, started in April with the completion of a good well, the Mid-Continent Petroleum Corp.'s No. 1 Bruner, NE cor. NW SE Section 9-7-8, which blew wild after completing a fishing job, making around 45,000,000 feet of gas a day. It was later drilled deeper and found oil in the Booch sand at 2,934-49 feet, where it made 550 bbls. of crude the first 24 hours. The well was fishing late in 1931 and this delayed its completion until the following year.

In June, the Limestone Oil & Gas Co.'s No. 1 Walker, C NE NE Section 15-7-8, found the Calvin sand at 1,238-45 feet, where the well started flowing at the rate of 5 bbls. an hour. It was a new producing horizon for the area and by the end of the year there were more than a dozen wells producing from the shallow Calvin sand and more than 30 other wells producing from the Booch sand and about 30 drilling operations in the vicinity. It soon developed into the most active field in the State. At the close of the year the potential production of the Booch sand was estimated at 20,000 bbls. a day, and the pipe line companies were forced to prorate the field to 30 per cent of its potential.

### Fish Pool Developed

Indications point to continued activity in the West Holdenville Field during this year. Only a few miles south and west are some excellent wells in the Fish Pool, Seminole County, which were opened in 1931 and was being developed during the first half of 1932. In this pool production was found in the Wapanucka lime which yielded wells ranging

## Oklahoma

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WASHINGTON COUNTY:** | | | | | | | | | | | | | |
| Daily average | 4,045 | 4,044 | 4,016 | 3,992 | 3,919 | 3,888 | 3,814 | 3,810 | 3,863 | 3,837 | 3,809 | 3,792 | |
| Month | 125,395 | 117,276 | 124,496 | 119,760 | 121,489 | 116,640 | 118,234 | 118,110 | 115,890 | 118,947 | 114,270 | 117,552 | 1,428,059 |
| **NOWATA COUNTY:** | | | | | | | | | | | | | |
| Daily average | 5,030 | 5,035 | 5,011 | 4,966 | 4,927 | 4,876 | 4,775 | 4,747 | 4,806 | 4,716 | 4,730 | 4,726 | |
| Month | 155,930 | 146,015 | 155,341 | 148,980 | 152,947 | 146,280 | 148,025 | 147,157 | 144,180 | 146,196 | 141,900 | 146,506 | 1,779,557 |
| **ROGERS COUNTY:** | | | | | | | | | | | | | |
| Daily average | 1,447 | 1,456 | 1,462 | 1,469 | 1,450 | 1,432 | 1,415 | 1,419 | 1,461 | 1,459 | 1,452 | 1,460 | |
| Month | 44,857 | 42,224 | 45,322 | 44,070 | 44,950 | 42,990 | 43,865 | 43,989 | 43,830 | 45,229 | 43,560 | 45,260 | 530,146 |
| **OSAGE AND EASTERN KAY COUNTIES:** | | | | | | | | | | | | | |
| Burbank— | | | | | | | | | | | | | |
| Daily average | 11,440 | 11,875 | 10,831 | 10,792 | 11,106 | 11,227 | 10,810 | 10,704 | 10,693 | 10,702 | 10,362 | 10,284 | |
| Month | 354,640 | 329,875 | 335,761 | 323,760 | 344,100 | 336,810 | 335,110 | 331,824 | 320,790 | 331,762 | 310,860 | 318,804 | 3,974,096 |
| Osage, outside Burbank— | | | | | | | | | | | | | |
| Daily average | 17,528 | 16,539 | 17,390 | 18,115 | 18,925 | 20,440 | 19,625 | 18,838 | 18,509 | 18,491 | 18,296 | 17,744 | |
| Month | 543,368 | 479,631 | 539,090 | 543,450 | 586,675 | 613,200 | 608,375 | 583,978 | 555,270 | 573,221 | 548,880 | 550,064 | 6,725,282 |
| **TULSA AND WAGONER COUNTIES:** | | | | | | | | | | | | | |
| Bird Creek, Owasso, etc.— | | | | | | | | | | | | | |
| Daily average | 3,107 | 3,097 | 3,017 | 2,987 | 2,990 | 2,979 | 2,947 | 2,894 | 2,843 | 2,833 | 2,837 | 2,876 | |
| Month | 96,317 | 89,813 | 93,527 | 89,610 | 92,690 | 89,370 | 91,357 | 89,714 | 85,290 | 87,823 | 85,110 | 87,296 | 1,077,917 |
| Red Fork, Sand Springs, Bruner— | | | | | | | | | | | | | |
| Daily average | 565 | 591 | 515 | 527 | 532 | 518 | 507 | 511 | 499 | 503 | 502 | 501 | |
| Month | 17,515 | 17,139 | 15,965 | 15,810 | 16,492 | 15,540 | 15,717 | 15,841 | 14,970 | 15,593 | 15,060 | 15,531 | 191,173 |
| Bixby, Leonard— | | | | | | | | | | | | | |
| Daily average | 1,034 | 991 | 1,035 | 995 | 998 | 991 | 973 | 960 | 971 | 966 | 964 | 960 | |
| Month | 31,744 | 28,449 | 32,085 | 29,850 | 30,628 | 29,730 | 30,163 | 29,760 | 29,130 | 29,946 | 28,920 | 29,760 | 360,165 |
| Broken Arrow, Coweta— | | | | | | | | | | | | | |
| Daily average | 757 | 740 | 771 | 763 | 751 | 749 | 742 | 814 | 791 | 782 | 777 | 769 | |
| Month | 23,467 | 21,460 | 23,901 | 22,890 | 23,281 | 22,470 | 23,002 | 25,234 | 23,730 | 24,273 | 23,310 | 23,839 | 280,857 |
| **TULSA, OKMULGEE AND MUSKOGEE COUNTIES:** | | | | | | | | | | | | | |
| Okmulgee and Beggs— | | | | | | | | | | | | | |
| Daily average | 3,157 | 3,730 | 3,111 | 2,914 | 2,910 | 2,813 | 2,916 | 2,945 | 3,094 | 3,006 | 3,016 | 3,011 | |
| Month | 97,867 | 80,620 | 96,441 | 87,420 | 90,210 | 84,390 | 90,396 | 91,295 | 90,120 | 93,186 | 90,480 | 93,341 | 1,085,766 |
| Mounds— | | | | | | | | | | | | | |
| Daily average | 889 | 839 | 752 | 801 | 769 | 770 | 791 | 805 | 907 | 894 | 910 | 902 | |
| Month | 27,559 | 24,231 | 23,312 | 24,030 | 23,839 | 23,100 | 24,521 | 24,986 | 27,210 | 27,714 | 27,300 | 27,962 | 305,864 |
| Bald Hill and Haskell— | | | | | | | | | | | | | |
| Daily average | 1,370 | 1,433 | 1,463 | 1,412 | 1,391 | 1,365 | 1,370 | 1,393 | 1,417 | 1,404 | 1,407 | 1,411 | |
| Month | 42,470 | 41,557 | 45,353 | 42,360 | 43,121 | 40,950 | 42,470 | 43,183 | 42,510 | 43,534 | 42,210 | 43,741 | 513,449 |
| Morris, Boynton, Cole— | | | | | | | | | | | | | |
| Daily average | 1,178 | 1,152 | 1,092 | 1,090 | 1,102 | 1,114 | 1,144 | 1,165 | 1,237 | 1,202 | 1,208 | 1,209 | |
| Month | 36,362 | 33,408 | 33,852 | 32,700 | 34,162 | 33,420 | 35,464 | 36,115 | 37,110 | 37,262 | 36,240 | 37,479 | 423,575 |
| **OKMULGEE, OKFUSKEE, SEMINOLE, HUGHES AND POTTAWATOMIE COUNTIES:** | | | | | | | | | | | | | |
| Seminole City— | | | | | | | | | | | | | |
| Daily average | 11,286 | 10,832 | 11,005 | 11,233 | 11,131 | 10,962 | 10,893 | 10,876 | 10,975 | 10,713 | 9,912 | 9,952 | |
| Month | 349,866 | 315,578 | 341,155 | 336,990 | 345,061 | 328,860 | 337,683 | 337,156 | 329,250 | 332,103 | 297,390 | 308,512 | 3,959,604 |
| East Seminole— | | | | | | | | | | | | | |
| Daily average | 1,114 | 1,158 | 1,183 | 1,200 | 1 238 | 1,237 | 1,172 | 1,151 | 1,049 | 1,082 | 959 | 927 | |
| Month | 34,534 | 33,524 | 36,673 | 36,000 | 38,378 | 37,110 | 36,332 | 35,681 | 31,470 | 33,542 | 28,770 | 28,737 | 410,751 |
| Bowlegs— | | | | | | | | | | | | | |
| Daily average | 11,802 | 12,564 | 11,863 | 11,682 | 11,712 | 12,138 | 11,845 | 11,863 | 11,350 | 10,862 | 10,126 | 9,949 | |
| Month | 365,862 | 364,356 | 367,753 | 350,460 | 363,103 | 364,140 | 367,195 | 367,752 | 340,500 | 336,722 | 303,780 | 308,419 | 4,200,042 |
| Little River— | | | | | | | | | | | | | |
| Daily average | 17,717 | 18,172 | 18,483 | 17,139 | 18,129 | 17,012 | 17,675 | 18,120 | 17,711 | 17,062 | 16,239 | 16,088 | |
| Month | 549,227 | 526,988 | 572,978 | 513,870 | 561,999 | 510,360 | 547,925 | 561,720 | 531,330 | 528,922 | 487,170 | 498,728 | 6,391,212 |
| East Little River— | | | | | | | | | | | | | |
| Daily average | 1,846 | 2,021 | 1,943 | 1,837 | 1,909 | 1,853 | 1,802 | 1,734 | 1,606 | 1,567 | 1,426 | 1,280 | |
| Month | 57,226 | 58,609 | 60,232 | 55,110 | 59,179 | 55,590 | 55,893 | 53,754 | 48,180 | 48,577 | 42,780 | 39,680 | 634,781 |
| East Earlsboro— | | | | | | | | | | | | | |
| Daily average | 12,069 | 12,459 | 12,256 | 12,184 | 12,122 | 12,813 | 13,234 | 13,975 | 14,075 | 15,364 | 15,163 | 16,407 | |
| Month | 374,139 | 361,311 | 379,936 | 365,520 | 375,782 | 384,390 | 410,254 | 402,225 | 422,250 | 476,184 | 454,890 | 508,617 | 4,912,498 |
| Earlsboro— | | | | | | | | | | | | | |
| Daily average | 12,933 | 8,651 | 13,273 | 13,624 | 13,560 | 13,475 | 13,413 | 13,225 | 12,889 | 12,813 | 12,096 | 12,211 | |
| Month | 401,078 | 250,879 | 411,463 | 408,720 | 420,360 | 404,250 | 415,803 | 409,975 | 386,670 | 397,203 | 362,880 | 378,541 | 4,647,822 |
| South Earlsboro— | | | | | | | | | | | | | |
| Daily average | 4,597 | 4,132 | 3,875 | 3,892 | 3,172 | 3,238 | 2,820 | 2,392 | 2,412 | 2,287 | 2,241 | 2,002 | |
| Month | 142,507 | 119,828 | 120,125 | 116,760 | 98,332 | 97,140 | 87,420 | 74,183 | 72,360 | 70,897 | 67,230 | 62,062 | 1,128,844 |
| Searight— | | | | | | | | | | | | | |
| Daily average | 3,401 | 3,272 | 3,380 | 3,755 | 3,531 | 3,525 | 3,838 | 3,338 | 3,367 | 3,302 | 3,117 | 2,786 | |
| Month | 105,431 | 94,888 | 104,780 | 112,650 | 109,461 | 105,750 | 118,978 | 103,478 | 101,010 | 102,362 | 93,510 | 86,366 | 1,238,664 |
| Mission— | | | | | | | | | | | | | |
| Daily average | 6,949 | 6,942 | 6,771 | 6,788 | 6,878 | 7,138 | 6,899 | 6,584 | 6,562 | 6,775 | 6,277 | 5,920 | |
| Month | 215,419 | 201,318 | 209,901 | 203,640 | 216,318 | 214,140 | 213,869 | 204,104 | 196,860 | 210,025 | 188,310 | 183,520 | 2,457,424 |

(Continued on Next Page)

from 100 bbls. to 2,500 bbls. daily, together with some large gas wells.

The Fish Pool was extended a quarter of a mile to the east in December, 1932, by Winona Oil Co. and others' No. 1 Harjo, SE cor. NW NW Section 29-7-8, Seminole County, which is rated as a 250-bbl. well from the Wapanucka lime at 3,073-95 feet.

In southern Pottawatomie County a new pool was opened in May on a unitized block of acreage owned by the Barnsdall Oil Co., Gypsy Oil Co. and others. The well was known as No. 1 Gray, NE cor. SW Section 25-6-4. It flowed 135 bbls. of oil the first hour from the Simpson sand at 3,478-90 feet, and when opened up for a potential test made 1,473 bbls. of oil in 21 hours. The operation of the well was taken over by the Gypsy Oil Co. Under the proration rules in force in the State it was pinched to 50 bbls. of oil a day, and further drilling operations in the pool were limited to one offset which was completed by the same companies, making around 400 bbls. on its initial production test. Under the state proration rules both of these wells are pinched to 50 bbls. daily. The pool is known as the West Konawa Pool, and was 6 miles from the nearest production.

At the close of 1931 the Carter Oil Co.'s No. 1 Monnett, SW cor. Section 35-7-4, extended production in the St. Louis Pool, to the south. Drilling op-

## Oklahoma (Continued)

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carr City— | | | | | | | | | | | | | |
| Daily average | 17,902 | 18,124 | 15,877 | 13,756 | 11,634 | 9,987 | 9,780 | 9,563 | 9,083 | 8,702 | 8,087 | 8,122 | |
| Month | 554,962 | 525,596 | 492,187 | 382,680 | 360,654 | 299,610 | 303,180 | 296,453 | 272,490 | 269,762 | 242,610 | 251,782 | 4,251,966 |
| Maud— | | | | | | | | | | | | | |
| Daily average | 2,163 | 2,116 | 2,065 | 2,052 | 2,098 | 1,961 | 1,915 | 1,769 | 1,712 | 1,694 | 1,633 | 1,606 | |
| Month | 67,053 | 61,364 | 64,015 | 61,560 | 64,790 | 58,830 | 59,365 | 54,839 | 51,360 | 52,514 | 48,990 | 49,786 | 694,466 |
| Total Seminole Field— | | | | | | | | | | | | | |
| Daily average | 103,784 | 100,491 | 101,974 | 98,132 | 97,207 | 95,239 | 95,287 | 93,591 | 92,791 | 92,123 | 87,276 | 87,250 | |
| Month | 3,217,304 | 2,914,239 | 3,161,194 | 2,943,960 | 3,013,417 | 2,860,170 | 2,953,897 | 2,901,321 | 2,783,730 | 2,855,813 | 2,618,280 | 2,704,750 | 34,928,075 |
| Allen— | | | | | | | | | | | | | |
| Daily average | 8,591 | 9,441 | 9,046 | 9,073 | 8,855 | 8,924 | 8,775 | 8,969 | 8,882 | 8,962 | 8,645 | 8,608 | |
| Month | 266,321 | 273,789 | 280,426 | 272,190 | 274,505 | 267,720 | 272,025 | 278,039 | 266,460 | 277,822 | 259,350 | 266,848 | 3,255,495 |
| Konawa— | | | | | | | | | | | | | |
| Daily average | 5,483 | 5,081 | 5,097 | 5,110 | 4,924 | 5,050 | 4,563 | 4,538 | 4,562 | 4,209 | 3,905 | 3,679 | |
| Month | 169,973 | 147,349 | 158,007 | 153,300 | 152,954 | 151,500 | 141,453 | 140,678 | 136,860 | 130,479 | 117,050 | 114,049 | 1,713,652 |
| Asher-Wanette— | | | | | | | | | | | | | |
| Daily average | 4,283 | 3,744 | 4,842 | 4,769 | 4,382 | 4,346 | 4,162 | 4,314 | 4,546 | 4,807 | 3,813 | 3,670 | |
| Month | 131,843 | 108,576 | 150,102 | 143,070 | 135,842 | 130,380 | 129,022 | 133,734 | 136,380 | 149,017 | 114,390 | 113,770 | 1,576,126 |
| Pearson-St. Louis— | | | | | | | | | | | | | |
| Daily average | 18,754 | 17,949 | 17,452 | 18,668 | 19,214 | 18,852 | 19,475 | 18,185 | 17,366 | 17,637 | 17,567 | 17,683 | |
| Month | 581,374 | 520,521 | 541,012 | 560,040 | 595,634 | 565,590 | 603,725 | 562,805 | 520,980 | 546,747 | 527,010 | 548,173 | 6,673,611 |
| Sasakwa— | | | | | | | | | | | | | |
| Daily average | 1,702 | 1,852 | 1,879 | 1,859 | 1,925 | 1,906 | 1,703 | 1,710 | 1,606 | 1,542 | 1,542 | 1,507 | |
| Month | 52,762 | 53,708 | 58,249 | 55,770 | 59,675 | 57,180 | 52,793 | 53,010 | 48,180 | 48,422 | 46,260 | 46,717 | 632,726 |
| Beebe— | | | | | | | | | | | | | |
| Daily average | 2,508 | 2,462 | 2,507 | 2,473 | 2,391 | 2,311 | 2,290 | 2,257 | 2,220 | 2,203 | 2,167 | 2,093 | |
| Month | 77,748 | 71,398 | 77,717 | 74,190 | 74,121 | 69,330 | 70,990 | 69,967 | 66,600 | 68,293 | 65,010 | 64,883 | 850,247 |
| Henryetta, Deaner-Lyons, etc.— | | | | | | | | | | | | | |
| Daily average | 1,924 | 1,828 | 1,968 | 1,891 | 1,845 | 1,806 | 1,811 | 1,818 | 1,839 | 1,826 | 1,844 | 1,809 | |
| Month | 59,644 | 53,012 | 61,008 | 56,730 | 57,195 | 54,180 | 56,141 | 56,358 | 55,170 | 56,916 | 55,320 | 56,079 | 677,753 |
| Wewoka— | | | | | | | | | | | | | |
| Daily average | 6,921 | 6,998 | 6,437 | 5,416 | 5,540 | 5,790 | 5,288 | 4,970 | 4,614 | 4,412 | 4,273 | 4,217 | |
| Month | 214,551 | 202,942 | 199,547 | 162,480 | 171,740 | 173,700 | 163,928 | 154,070 | 138,420 | 136,772 | 128,190 | 130,727 | 1,977,067 |
| Cromwell— | | | | | | | | | | | | | |
| Daily average | 4,922 | 4,901 | 4,690 | 4,718 | 4,837 | 4,940 | 5,225 | 5,136 | 5,112 | 5,156 | 5,173 | 5,109 | |
| Month | 152,582 | 142,129 | 145,390 | 141,540 | 149,947 | 148,200 | 161,975 | 159,216 | 153,360 | 159,836 | 155,190 | 158,379 | 1,827,744 |
| Papoose-Gilcrease— | | | | | | | | | | | | | |
| Daily average | 1,672 | 1,759 | 1,747 | 1,736 | 1,745 | 1,739 | 1,750 | 1,813 | 1,803 | 1,797 | 1,752 | 1,740 | |
| Month | 51,832 | 51,011 | 54,157 | 52,080 | 54,095 | 52,170 | 54,250 | 56,203 | 54,090 | 55,707 | 52,560 | 53,940 | 642,095 |
| Jarvis-Holm— | | | | | | | | | | | | | |
| Daily average | 189 | 163 | 159 | 160 | 157 | 156 | 156 | 151 | 155 | 152 | 149 | 146 | |
| Month | 5,859 | 4,727 | 4,929 | 4,800 | 4,867 | 4,680 | 4,836 | 4,681 | 4,650 | 4,712 | 4,470 | 4,526 | 57,737 |
| Weleetka— | | | | | | | | | | | | | |
| Daily average | 755 | 678 | 792 | 717 | 693 | 694 | 690 | 682 | 689 | 693 | 682 | 671 | |
| Month | 23,405 | 19,662 | 24,552 | 21,510 | 21,483 | 20,820 | 21,390 | 21,142 | 20,670 | 21,483 | 20,460 | 20,801 | 257,378 |
| Holdenville-Fish— | | | | | | | | | | | | | |
| Daily average | 1,468 | 1,689 | 2,115 | 3,614 | 4,115 | 4,494 | 4,216 | 2,760 | 3,319 | 3,404 | 3,213 | 3,114 | |
| Month | 45,508 | 48,981 | 65,565 | 108,420 | 127,565 | 134,820 | 130,696 | 85,560 | 99,570 | 105,524 | 96,390 | 96,534 | 1,145,133 |
| Yeager— | | | | | | | | | | | | | |
| Daily average | 356 | 354 | 353 | 349 | 346 | 341 | 340 | 336 | 331 | 333 | 329 | 322 | |
| Month | 11,036 | 10,266 | 10,943 | 10,470 | 10,726 | 10,230 | 10,540 | 10,416 | 9,930 | 10,323 | 9,870 | 9,982 | 124,732 |
| Miscellaneous— | | | | | | | | | | | | | |
| Daily average | 457 | 449 | 426 | 411 | 513 | 560 | 511 | 490 | 481 | 462 | 457 | 407 | |
| Month | 14,167 | 13,021 | 13,206 | 12,330 | 15,903 | 16,800 | 15,841 | 15,190 | 14,430 | 14,322 | 13,710 | 12,617 | 171,537 |
| CREEK AND TULSA COUNTIES: | | | | | | | | | | | | | |
| Glen Pool, Jenks, Kiefer— | | | | | | | | | | | | | |
| Daily average | 3,827 | 3,688 | 4,339 | 3,965 | 3,949 | 3,914 | 3,902 | 3,889 | 3,870 | 3,860 | 3,835 | 3,762 | |
| Month | 118,637 | 106,952 | 134,509 | 118,950 | 122,419 | 117,420 | 120,962 | 120,559 | 116,100 | 119,660 | 115,050 | 116,622 | 1,427,840 |
| Picket Prairie, Sapulpa and Fisher— | | | | | | | | | | | | | |
| Daily average | 2,268 | 2,318 | 2,222 | 2,227 | 2,219 | 2,221 | 2,214 | 2,190 | 2,169 | 2,166 | 2,147 | 2,111 | |
| Month | 70,308 | 67,222 | 68,913 | 66,810 | 68,789 | 66,630 | 68,634 | 67,890 | 65,070 | 67,146 | 64,410 | 65,441 | 807,263 |
| Cushing, Shamrock— | | | | | | | | | | | | | |
| Daily average | 11,943 | 11,884 | 11,219 | 11,715 | 11,695 | 11,947 | 11,950 | 11,944 | 11,941 | 12,214 | 12,082 | 12,063 | |
| Month | 370,233 | 344,636 | 347,789 | 351,450 | 362,545 | 358,410 | 370,450 | 370,264 | 358,230 | 378,634 | 362,460 | 373,953 | 4,349,054 |
| Bristow, Kellyville and Depew— | | | | | | | | | | | | | |
| Daily average | 8,555 | 8,236 | 8,287 | 8,305 | 8,311 | 8,316 | 8,310 | 8,514 | 8,714 | 8,721 | 8,747 | 8,464 | |
| Month | 265,205 | 238,844 | 256,897 | 249,150 | 257,641 | 249,480 | 257,610 | 263,934 | 261,420 | 270,351 | 262,410 | 262,384 | 3,095,326 |
| Eastern Bristow or Slick— | | | | | | | | | | | | | |
| Daily average | 3,495 | 3,301 | 3,195 | 3,160 | 3,171 | 3,166 | 3,145 | 3,147 | 3,299 | 3,282 | 3,240 | 3,194 | |
| Month | 108,345 | 95,729 | 99,045 | 94,800 | 98,301 | 94,980 | 97,495 | 97,557 | 98,970 | 101,742 | 97,200 | 99,014 | 1,183,178 |
| PAWNEE COUNTY: | | | | | | | | | | | | | |
| Cleveland— | | | | | | | | | | | | | |
| Daily average | 1,431 | 1,472 | 1,469 | 1,451 | 1,446 | 1,439 | 1,430 | 1,441 | 1,432 | 1,426 | 1,421 | 1,406 | |
| Month | 44,361 | 42,688 | 45,539 | 43,530 | 44,826 | 43,170 | 44,330 | 44,671 | 42,960 | 44,206 | 42,630 | 43,586 | 526,497 |
| Keystone-Mannford— | | | | | | | | | | | | | |
| Daily average | 2,526 | 2,455 | 2,126 | 2,117 | 2,122 | 2,100 | 2,108 | 2,715 | 2,644 | 2,610 | 2,617 | 2,609 | |
| Month | 78,306 | 71,195 | 65,906 | 63,510 | 65,813 | 63,000 | 65,348 | 84,165 | 79,320 | 80,910 | 78,510 | 80,879 | 876,862 |
| Jennings— | | | | | | | | | | | | | |
| Daily average | 2,177 | 2,046 | 1,778 | 1,810 | 1,802 | 1,779 | 1,767 | 1,758 | 1,750 | 1,752 | 1,756 | 1,742 | |
| Month | 67,487 | 59,334 | 55,118 | 54,300 | 55,862 | 53,370 | 54,777 | 54,498 | 52,500 | 54,312 | 52,680 | 54,002 | 668,240 |
| Otse— | | | | | | | | | | | | | |
| Daily average | 633 | 621 | 644 | 637 | 636 | 631 | 629 | 628 | 621 | 616 | 614 | 618 | |
| Month | 19,623 | 18,009 | 19,964 | 19,110 | 19,716 | 18,930 | 19,499 | 19,468 | 18,630 | 19,096 | 18,420 | 19,158 | 229,623 |
| Ralston-Masham— | | | | | | | | | | | | | |
| Daily average | 98 | 108 | 109 | 106 | 101 | 99 | 97 | 96 | 95 | 93 | 93 | 92 | |
| Month | 3,038 | 3,132 | 3,379 | 3,180 | 3,131 | 2,970 | 3,007 | 2,976 | 2,850 | 2,883 | 2,790 | 2,852 | 36,188 |
| PAYNE COUNTY: | | | | | | | | | | | | | |
| Yale, Quay, Ingalls-Magnolia— | | | | | | | | | | | | | |
| Daily average | 3,637 | 3,639 | 3,582 | 3,570 | 3,492 | 3,504 | 3,489 | 3,510 | 3,516 | 3,494 | 3,487 | 3,460 | |
| Month | 112,747 | 105,531 | 111,073 | 107,100 | 108,283 | 105,120 | 108,159 | 108,810 | 105,480 | 108,314 | 104,610 | 107,260 | 1,292,487 |
| North Cushing— | | | | | | | | | | | | | |
| Daily average | 1,448 | 1,391 | 1,143 | 1,144 | 1,127 | 1,116 | 1,120 | 1,119 | 1,102 | 1,109 | 1,103 | 1,086 | |
| Month | 44,888 | 40,339 | 35,433 | 34,320 | 34,937 | 33,480 | 34,720 | 34,689 | 33,060 | 34,379 | 33,090 | 33,666 | 427,001 |
| Mehan-Ripley— | | | | | | | | | | | | | |
| Daily average | 530 | 512 | 494 | 503 | 498 | 494 | 492 | 486 | 483 | 481 | 482 | 475 | |
| Month | 16,430 | 14,848 | 15,314 | 15,090 | 15,438 | 14,820 | 15,262 | 15,066 | 14,490 | 14,911 | 14,460 | 14,725 | 180,344 |
| OKLAHOMA COUNTY: | | | | | | | | | | | | | |
| Oklahoma City— | | | | | | | | | | | | | |
| Daily average | 110,883 | 83,983 | 97,260 | 102,646 | 102,108 | 101,820 | 99,445 | 96,373 | 77,163 | 71,638 | 75,207 | 75,693 | |
| Month | 3,437,373 | 2,435,507 | 3,015,060 | 3,079,380 | 3,165,348 | 3,054,600 | 3,082,795 | 2,987,563 | 2,314,890 | 2,222,328 | 2,256,210 | 2,346,483 | 33,397,537 |
| LINCOLN COUNTY: | | | | | | | | | | | | | |
| Stroud— | | | | | | | | | | | | | |
| Daily average | 587 | 577 | 561 | 567 | 562 | 557 | 549 | 550 | 542 | 538 | 540 | 533 | |
| Month | 18,197 | 16,733 | 17,391 | 17,010 | 17,422 | 16,710 | 17,019 | 17,050 | 16,260 | 16,678 | 16,200 | 16,523 | 203,193 |
| Davenport— | | | | | | | | | | | | | |
| Daily average | 860 | 812 | 862 | 814 | 811 | 815 | 810 | 803 | 796 | 793 | 802 | 796 | |
| Month | 26,660 | 23,548 | 26,722 | 24,420 | 25,141 | 24,450 | 25,110 | 24,862 | 23,880 | 24,583 | 24,060 | 24,676 | 298,112 |
| Kendrick— | | | | | | | | | | | | | |
| Daily average | 115 | 104 | 109 | 111 | 112 | 111 | 108 | 102 | 98 | 96 | 95 | 92 | |
| Month | 3,565 | 3,016 | 3,379 | 3,330 | 3,472 | 3,330 | 3,348 | 3,162 | 2,940 | 2,976 | 2,850 | 2,852 | 38,220 |
| Chandler— | | | | | | | | | | | | | |
| Daily average | 4,184 | 3,948 | 3,989 | 3,914 | 3,898 | 3,892 | 3,877 | 3,760 | 3,726 | 3,719 | 3,703 | 3,682 | |
| Month | 129,704 | 114,492 | 123,659 | 117,420 | 120,838 | 116,760 | 120,187 | 116,560 | 111,780 | 115,289 | 111,090 | 114,142 | 1,411,921 |
| Section 1-15-6— | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | 151 | 20 | ..... | ..... | 120 | 691 | 552 | |
| Month | ..... | ..... | ..... | ..... | ..... | 4,530 | 620 | ..... | ..... | 3,720 | 20,730 | 17,100 | 46,700 |

(Continued on Next Page)

# The Savage still travels by dugout ...*what price tradition?*

Civilization developed hand in hand with transportation. Had we followed the tradition of our forefathers, we would not have today a nation criss-crossed with railroads, good roads and dotted with thousands of cities and towns. Millions of our families live in luxury as compared with families of only a few hundred years ago.

## *a message for drilling contractors*

Had we continued to follow tradition in wire rope manufacture, we would not have today LAY-SET Preformed Wire Rope, you would still be wasting thousands of dollars in rotary oil field operations where wire rope plays so important a part.

The harder the job, the better the reason for LAY-SET. It is the line *for rotary drilling* . . . for faster spooling, tighter spooling and easier handling. LAY-SET will make more hole faster.

## LAY-SET PREFORMED WIRE ROPE

*Made by modern methods . . . for today's needs*

# THE MODERN METHOD ..OF MAKING WIRE ROPE *eliminates internal stress*

Internal stress is an inexcusable fault in non-preformed wire rope. LAY-SET Preformed Wire Rope, however, is an assembly of perfectly shaped strands. Each wire and strand is helically preformed so it lies naturally in position without internal spring tension. In other words, internal stress is eliminated.

Unbalanced strand tension is another inexcusable fault in non-preformed wire rope. In LAY-SET Preformed Wire Rope, however, each strand carries the same portion of the load . . . therefore all strands pull equally hard. One strand won't dig in or others bulge out. Technically, this is called "low-stranding" and "high-stranding" . . . either of which will quickly destroy a rope.

Look at the illustrations to the left, made from actual photographs. You can remove a complete strand, reverse it, and place it back into position. This demonstration is proof that the strands in LAY-SET Preformed Wire Rope are perfectly shaped and consequently perfectly balanced.

## *Now consider old-fashioned non-preformed wire rope . . .*

In the first place, the ends must be securely seized. Remove this seizing, and the strands and wires fly apart. The reason they fly apart is because each wire and strand is virtually a helical spring held forcibly in its helical shape. A wire rope of this old-fashioned construction cannot be expected to deliver the amount of work you naturally should expect.

We solicit side-by-side comparative tests. Should you find that LAY-SET Preformed Wire Rope does not live up to all we claim for it, we will gladly make an adjustment based upon the service actually rendered.

**HAZARD WIRE ROPE COMPANY**

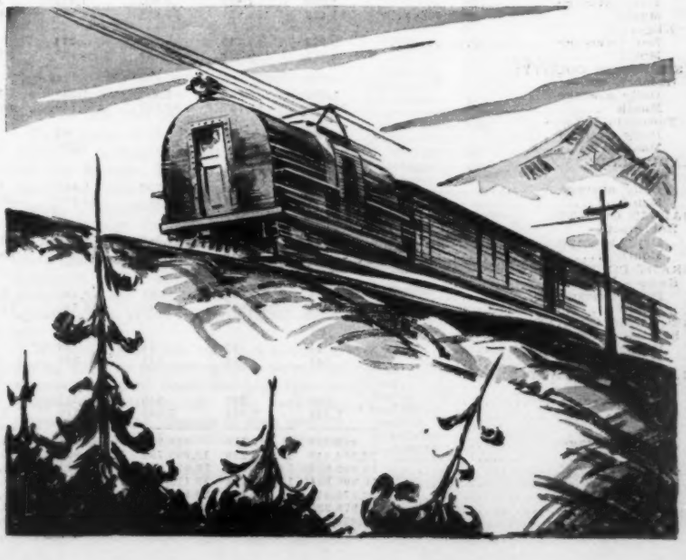
WILKES-BARRE, PENNSYLVANIA

New York Pittsburgh Chicago Denver
Fort Worth Los Angeles San Francisco
Birmingham Philadelphia Tacoma

Established in 1846

*Note:*

*HAZARD'S Non-preformed Wire Ropes are recommended for Cable Tool Drilling Lines, Casing Lines and Sand Lines.*



erations on the other wells were suspended on adjoining leases for 60 days and the discovery well was shut in. The truce delayed drilling until April 1, of this year. The discovery well was rated at 600 bbls. The three offsets were completed during the summer months and all the wells showed a rapid decline.

Another interesting well completed in the extreme southwest edge of the St. Louis Pool, found a showing of oil in the Cromwell sand and after being drilled deeper to the Simpson sand at 4,155 feet, it made 1,940 bbls. of oil the first 19¾ hours. This was completed in November and several offsets were started but none were completed by the first of the year.

### Developed Calvin Sand

The Calvin sand is found in practically all the pools in the Greater Seminole district. It is a shallow horizon that was passed by when the wells were being drilled to the Wilcox sand. Operators began plugging back some of the exhausted Wilcox sand wells to the Calvin sand horizon the first part of the year and it was found that this horizon was "spotted." In the Wanette Field in southern Pottawatomie County, an offset to a large Calvin sand well was completed for a small well in the same sand.

Greater Seminole operators agreed to restrict operations in the Calvin sand 60 days in the Wanette Field, the East Earlsboro Pool, and in the area west of the Seminole City Field. The first agreement expired May 1, and it was extended 30 days to June 1. After that time it was agreed that all Calvin sand wells

## Oklahoma (Continued)

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KAY, GRANT AND NOBLE COUNTIES: | | | | | | | | | | | | | |
| Blackwell— | | | | | | | | | | | | | |
| Daily average | 733 | 773 | 737 | 729 | 731 | 726 | 733 | 727 | 724 | 730 | 729 | 719 | |
| Month | 22,723 | 32,388 | 22,847 | 21,870 | 22,661 | 21,780 | 22,723 | 22,537 | 21,720 | 22,630 | 21,870 | 22,289 | 268,038 |
| Vernon— | | | | | | | | | | | | | |
| Daily average | 411 | 457 | 459 | 466 | 458 | 454 | 459 | 454 | 451 | 452 | 449 | 444 | |
| Month | 12,741 | 14,123 | 14,229 | 13,980 | 14,198 | 13,620 | 14,229 | 14,074 | 13,530 | 14,012 | 13,470 | 13,764 | 165,970 |
| Otstot— | | | | | | | | | | | | | |
| Daily average | 892 | 903 | 876 | 862 | 851 | 846 | 860 | 847 | 843 | 841 | 844 | 849 | |
| Month | 27,652 | 26,187 | 27,156 | 25,860 | 26,381 | 25,380 | 26,660 | 26,257 | 25,290 | 26,071 | 25,320 | 26,319 | 314,533 |
| Deer Creek— | | | | | | | | | | | | | |
| Daily average | 475 | 478 | 461 | 461 | 457 | 453 | 457 | 449 | 450 | 451 | 448 | 442 | |
| Month | 14,726 | 13,862 | 14,291 | 13,830 | 14,167 | 13,590 | 14,167 | 13,919 | 13,500 | 13,981 | 13,440 | 13,702 | 167,174 |
| Ponca City— | | | | | | | | | | | | | |
| Daily average | 387 | 475 | 446 | 439 | 440 | 436 | 444 | 441 | 442 | 444 | 440 | 443 | |
| Month | 11,997 | 13,775 | 13,826 | 13,170 | 13,640 | 13,080 | 13,764 | 13,671 | 13,260 | 13,764 | 13,200 | 13,733 | 160,880 |
| Mervine— | | | | | | | | | | | | | |
| Daily average | 207 | 210 | 190 | 189 | 183 | 184 | 182 | 181 | 180 | 179 | 177 | 180 | |
| Month | 6,417 | 6,090 | 5,890 | 5,670 | 5,672 | 5,520 | 5,642 | 5,611 | 5,400 | 5,549 | 5,310 | 5,580 | 68,352 |
| Braman— | | | | | | | | | | | | | |
| Daily average | 1,665 | 1,714 | 1,662 | 1,674 | 1,704 | 1,731 | 1,717 | 1,704 | 1,681 | 1,692 | 1,699 | 1,707 | |
| Month | 51,615 | 49,706 | 51,522 | 50,220 | 52,824 | 51,930 | 53,227 | 52,824 | 50,430 | 52,452 | 50,970 | 52,917 | 620,637 |
| Hubbard— | | | | | | | | | | | | | |
| Daily average | 921 | 966 | 900 | 893 | 890 | 930 | 1,015 | 977 | 982 | 977 | 974 | 969 | |
| Month | 28,561 | 28,014 | 27,900 | 26,790 | 27,590 | 27,900 | 31,465 | 30,287 | 29,460 | 30,287 | 29,220 | 30,039 | 347,813 |
| Thomas— | | | | | | | | | | | | | |
| Daily average | 434 | 427 | 395 | 404 | 447 | 427 | 449 | 406 | 417 | 413 | 407 | 402 | |
| Month | 13,454 | 12,383 | 12,245 | 12,120 | 13,857 | 12,810 | 13,919 | 12,586 | 12,510 | 12,803 | 12,210 | 12,493 | 153,390 |
| Garrett— | | | | | | | | | | | | | |
| Daily average | 25 | 26 | 27 | 25 | 24 | 26 | 24 | 23 | 23 | 22 | 22 | 21 | |
| Month | 775 | 754 | 837 | 750 | 744 | 780 | 744 | 713 | 690 | 682 | 660 | 651 | 8,780 |
| Tonkawa— | | | | | | | | | | | | | |
| Daily average | 4,998 | 4,906 | 4,895 | 4,859 | 5,109 | 5,216 | 5,612 | 5,214 | 5,016 | 4,963 | 4,763 | 4,656 | |
| Month | 154,938 | 142,274 | 151,745 | 145,770 | 158,379 | 156,480 | 173,972 | 161,634 | 150,480 | 153,853 | 142,890 | 144,336 | 1,836,751 |
| Billings— | | | | | | | | | | | | | |
| Daily average | 231 | 231 | 211 | 210 | 207 | 203 | 204 | 203 | 201 | 201 | 201 | 197 | |
| Month | 7,161 | 6,699 | 6,541 | 6,300 | 6,417 | 6,090 | 6,324 | 6,293 | 6,030 | 6,231 | 6,030 | 6,107 | 76,223 |
| Perry and Miscellaneous— | | | | | | | | | | | | | |
| Daily average | 1,261 | 1,315 | 1,338 | 1,310 | 1,292 | 1,260 | 1,218 | 1,207 | 1,210 | 1,741 | 1,202 | 1,193 | |
| Month | 39,091 | 38,135 | 41,478 | 39,300 | 40,052 | 37,800 | 37,758 | 37,417 | 36,300 | 53,971 | 36,060 | 36,983 | 474,345 |
| GARFIELD COUNTY: | | | | | | | | | | | | | |
| Garber— | | | | | | | | | | | | | |
| Daily average | 2,856 | 2,740 | 2,122 | 2,965 | 3,018 | 3,016 | 2,982 | 2,963 | 2,914 | 2,863 | 2,819 | 2,690 | |
| Month | 88,536 | 79,480 | 96,782 | 88,950 | 93,558 | 90,480 | 92,442 | 91,853 | 87,420 | 88,753 | 84,570 | 83,390 | 1,066,194 |
| LOGAN COUNTY: | | | | | | | | | | | | | |
| Lovell— | | | | | | | | | | | | | |
| Daily average | 464 | 490 | 415 | 404 | 460 | 458 | 442 | 441 | 437 | 424 | 414 | 358 | |
| Month | 14,384 | 11,666 | 12,865 | 12,120 | 14,260 | 13,740 | 13,702 | 13,671 | 13,110 | 13,144 | 12,420 | 11,098 | 156,114 |
| Marshall— | | | | | | | | | | | | | |
| Daily average | 2,295 | 2,360 | 2,213 | 2,244 | 2,285 | 2,294 | 2,070 | 2,062 | 2,019 | 1,886 | 1,806 | 1,752 | |
| Month | 71,145 | 68,440 | 68,603 | 67,320 | 70,835 | 68,820 | 64,170 | 63,922 | 60,570 | 58,466 | 54,180 | 54,312 | 770,783 |
| CARTER COUNTY: | | | | | | | | | | | | | |
| Healdton— | | | | | | | | | | | | | |
| Daily average | 10,605 | 10,550 | 10,604 | 10,540 | 10,628 | 10,682 | 10,718 | 10,712 | 10,674 | 10,651 | 10,463 | 10,413 | |
| Month | 328,755 | 305,950 | 328,724 | 316,200 | 329,468 | 320,460 | 332,258 | 332,072 | 320,220 | 330,181 | 313,890 | 322,803 | 3,880,981 |
| Hewitt— | | | | | | | | | | | | | |
| Daily average | 5,333 | 5,648 | 5,379 | 5,518 | 5,700 | 5,715 | 5,690 | 5,620 | 5,611 | 5,646 | 5,608 | 5,582 | |
| Month | 165,323 | 163,792 | 166,749 | 165,540 | 176,979 | 171,450 | 176,390 | 174,220 | 168,330 | 175,026 | 168,240 | 173,042 | 2,045,081 |
| Graham— | | | | | | | | | | | | | |
| Daily average | 1,970 | 2,075 | 1,849 | 1,906 | 1,990 | 1,979 | 1,931 | 1,962 | 1,957 | 1,950 | 1,974 | 1,960 | |
| Month | 61,079 | 60,175 | 57,319 | 57,180 | 61,690 | 59,370 | 61,411 | 60,822 | 58,710 | 61,580 | 59,220 | 60,760 | 719,107 |
| Fox— | | | | | | | | | | | | | |
| Daily average | 1,730 | 1,662 | 1,666 | 1,660 | 1,654 | 1,664 | 1,662 | 1,658 | 1,649 | 1,669 | 1,653 | 1,643 | |
| Month | 53,630 | 48,198 | 51,646 | 49,800 | 51,274 | 49,920 | 51,522 | 51,398 | 49,470 | 51,739 | 49,590 | 50,933 | 609,120 |
| Sholom Alechem-Tatum— | | | | | | | | | | | | | |
| Daily average | 12,642 | 12,406 | 12,176 | 12,333 | 12,363 | 12,616 | 12,690 | 11,863 | 11,847 | 11,486 | 9,898 | 9,772 | |
| Month | 391,923 | 359,774 | 377,456 | 369,990 | 383,253 | 378,480 | 390,600 | 367,753 | 355,410 | 356,066 | 296,940 | 302,932 | 4,330,587 |
| STEPHENS AND COTTON COUNTIES: | | | | | | | | | | | | | |
| Loco-Milroy— | | | | | | | | | | | | | |
| Daily average | 1,247 | 1,230 | 1,248 | 1,236 | 1,229 | 1,219 | 1,205 | 1,201 | 1,189 | 1,183 | 1,172 | 1,142 | |
| Month | 38,657 | 35,670 | 38,688 | 37,080 | 38,099 | 36,570 | 37,355 | 37,231 | 35,670 | 36,673 | 35,160 | 35,402 | 442,255 |
| Comanche— | | | | | | | | | | | | | |
| Daily average | 1,513 | 1,420 | 1,434 | 1,440 | 1,436 | 1,590 | 1,570 | 1,573 | 1,561 | 1,540 | 1,554 | 1,560 | |
| Month | 47,056 | 41,180 | 44,454 | 43,200 | 44,516 | 47,700 | 48,670 | 48,763 | 46,830 | 47,740 | 46,620 | 48,360 | 555,091 |
| Duncan— | | | | | | | | | | | | | |
| Daily average | 3,171 | 3,218 | 3,342 | 3,311 | 3,514 | 3,465 | 3,415 | 2,604 | 2,486 | 2,524 | 2,560 | 2,572 | |
| Month | 98,301 | 93,322 | 103,633 | 99,330 | 108,934 | 103,950 | 105,865 | 80,724 | 74,580 | 78,244 | 76,800 | 79,732 | 1,103,415 |
| Walters— | | | | | | | | | | | | | |
| Daily average | 1,659 | 1,822 | 1,801 | 1,773 | 1,819 | 1,808 | 1,802 | 1,793 | 1,782 | 1,823 | 1,827 | 1,823 | |
| Month | 51,429 | 52,836 | 55,831 | 53,190 | 56,389 | 54,240 | 55,862 | 55,583 | 53,460 | 56,513 | 54,810 | 56,513 | 656,658 |
| Kilgore— | | | | | | | | | | | | | |
| Daily average | 223 | 219 | 216 | 214 | 211 | 212 | 209 | 207 | 202 | 177 | 176 | 174 | |
| Month | 6,913 | 6,351 | 6,696 | 6,420 | 6,541 | 6,360 | 6,479 | 6,417 | 6,060 | 5,487 | 5,280 | 5,394 | 74,398 |
| JEFFERSON COUNTY: | | | | | | | | | | | | | |
| Hambro, etc.— | | | | | | | | | | | | | |
| Daily average | 1,976 | 2,142 | 1,957 | 1,939 | 1,942 | 1,939 | 1,906 | 1,909 | 1,890 | 1,878 | 1,872 | 1,862 | |
| Month | 61,256 | 62,147 | 60,667 | 58,170 | 60,202 | 58,170 | 59,086 | 59,179 | 56,700 | 58,218 | 56,160 | 57,722 | 707,677 |
| Township 6s-6w— | | | | | | | | | | | | | |
| Daily average | 52 | 45 | ..... | 42 | 44 | 42 | 40 | 39 | 40 | 38 | 40 | 39 | |
| Month | 1,612 | 1,305 | ..... | 1,290 | 1,364 | 1,260 | 1,240 | 1,209 | 1,200 | 1,178 | 1,200 | 1,209 | 14,067 |
| CADDO COUNTY: | | | | | | | | | | | | | |
| Cement— | | | | | | | | | | | | | |
| Daily average | 2,204 | 1,463 | 207 | 1,480 | 1,497 | 1,476 | 1,467 | 2,276 | 2,390 | 2,383 | 2,372 | 2,066 | |
| Month | 68,324 | 42,427 | 6,417 | 44,400 | 46,407 | 44,280 | 45,477 | 70,556 | 71,700 | 73,873 | 71,160 | 64,046 | 64,067 |
| GARVIN COUNTY: | | | | | | | | | | | | | |
| Robberson— | | | | | | | | | | | | | |
| Daily average | 1,616 | 1,664 | 1,582 | 1,579 | 1,563 | 1,550 | 1,545 | 1,532 | 1,521 | 1,526 | 1,518 | 1,503 | |
| Month | 50,096 | 46,516 | 49,042 | 47,370 | 48,453 | 46,500 | 47,895 | 47,492 | 45,630 | 47,306 | 45,540 | 46,593 | 568,433 |
| GRADY COUNTY: | | | | | | | | | | | | | |
| Knox— | | | | | | | | | | | | | |
| Daily average | 1,855 | 1,930 | 1,911 | 1,890 | 1,475 | 1,869 | 1,861 | 1,855 | 1,847 | 2,010 | 1,960 | 1,949 | |
| Month | 57,505 | 53,970 | 59,241 | 56,700 | 53,125 | 56,070 | 57,691 | 57,505 | 55,410 | 62,310 | 58,800 | 60,419 | 695,746 |
| BECKHAM COUNTY: | | | | | | | | | | | | | |
| Sayre— | | | | | | | | | | | | | |
| Daily average | 11 | 12 | 11 | 10 | 11 | 11 | 10 | 10 | 10 | 11 | 10 | 10 | |
| Month | 341 | 348 | 341 | 300 | 341 | 330 | 310 | 310 | 300 | 341 | 300 | 310 | 3,872 |
| MARSHALL COUNTY: | | | | | | | | | | | | | |
| Madill— | | | | | | | | | | | | | |
| Daily average | 233 | 257 | 245 | 247 | 254 | 260 | 259 | 253 | 252 | 255 | 261 | 260 | |
| Month | 7,223 | 7,452 | 7,595 | 7,410 | 7,874 | 7,800 | 8,029 | 7,843 | 7,560 | 7,905 | 7,830 | 8,060 | 92,582 |
| Daily average | 440,779 | 407,110 | 419,316 | 423,934 | 424,820 | 425,241 | 420,341 | 411,086 | 390,176 | 384,381 | 378,031 | 375,393 | 408,435 |
| Total 1932 | 13,664,149 | 11,396,190 | 12,998,796 | 12,718,030 | 13,169,420 | 12,757,220 | 13,030,571 | 12,743,666 | 11,705,280 | 11,915,811 | 11,340,930 | 11,637,171 | 149,487,234 |
| Total 1931 | 14,850,953 | 13,531,980 | 16,627,687 | 16,815,990 | 17,333,867 | 16,678,200 | 16,420,080 | 9,517,279 | 7,946,880 | 12,951,893 | 16,430,730 | 16,598,299 | 175,703,848 |
| Total 1930 | 20,802,984 | 17,977,624 | 19,118,406 | 19,541,310 | 20,587,503 | 19,754,700 | 18,032,514 | 17,162,034 | 16,509,120 | 16,632,523 | 14,941,770 | 15,057,103 | 216,114,591 |
| Total 1929 | 22,575,874 | 20,464,164 | 20,838,362 | 20,235,390 | 21,545,453 | 20,561,112 | 22,371,925 | 22,429,522 | 21,299,490 | 20,821,646 | 19,192,760 | 20,092,876 | 252,229,474 |
| Total 1928 | 20,979,320 | 19,394,436 | 20,162,534 | 19,996,950 | 19,443,355 | 18,482,981 | 18,869,188 | 20,840,804 | 22,456,860 | 23,431,071 | 22,078,680 | 22,425,732 | 247,500,851 |
| Total 1927 | 19,035,436 | 19,762,848 | 22,480,921 | 22,208,130 | 22,358,463 | 22,830,330 | 26,522,546 | 26,283,350 | 24,111,666 | 24,247,053 | 23,083,380 | 22,208,417 | 276,022,024 |
| Total 1926 | 13,670,513 | 13,592,016 | 14,312,586 | 14,466,190 | 14,507,098 | 14,073,510 | 14,657,482 | 14,618,236 | 14,466,510 | 15,720,689 | 16,876,950 | 17,882,908 | 177,851,198 |

would be restricted to 50 bbls. a day during the balance of the year.

Leasing in the Greater Seminole area was active the first half of the year, the majority of the companies securing leases after the use of geophysical instruments.

### The Conservation Pool

The Conservation Pool, in Pontotoc County, was active during the first half of the year as the result of the Barnsdall Oil Co.'s No. 1 Hart, in Section 21-5-6, which made 150 bbls. of oil. Another large well completed in the field was the Freeborn Oil Co.'s No. 1 Brown, SE cor. NE NE Section 28-5-6, which swabbed 195 bbls. of oil the first 24 hours from the sand at 1,721-35 feet.

The production from the Conservation Pool soon became large enough to make it necessary to prorate the wells to the pipe line requirements. In May the pool was producing and shipping 500 bbls. daily which was the pipe line demand. The potential production was approximately 800 bbls. daily. Ten-day gauges were taken on all new wells in the field to determine potential production. After the field was prorated the drilling was continued in a conservative manner.

### County Line Pool

Lincoln County was given a number of wildcat tests, the majority of which were dry holes. One new pool was found in the county, along the Creek County line by drilling an old gas well deeper. The Pure Oil Co.'s No. 1 Unglesby-Pinkston, SW cor. SE SE NW Section 1,15-6, Lincoln County, was an old gas well drilled about seven years ago and completed for 11,000,000 feet of gas a day at a total depth of 3,655 feet. Early in 1931 a seismograph survey was made of the area and a Wilcox sand structure was indicated. The company decided to drill the old gas well deeper in April, 1932, and found oil in the Wilcox sand at 3,700-05 feet. The well started spraying oil and making 21,000,000 feet of gas a day. The casing was lowered and cemented at 3,700 feet and the well shut in after making 350 bbls. a day, awaiting a pipe line connection. In September the company constructed a pipe line into the field and the wells were prorated to 50 bbls. per well per day. The completions in this pool averaged 800 bbls. each in initial production.

### Osage Discoveries

Two wildcat tests in the western part of Osage County were completed as large producers and opened pools near the naval reserve area in the county in May and June. The first test to find oil was Peters Petroleum Corp. and Producers & Refiners Corp.'s No. 1 in the SE cor. NW NE Section 24-24-7, which found showings of oil and gas in all the upper sands. It found the Hominy sand at 2,732-37 feet, which yielded 150 bbls. a day, and the Siliceous lime at 2,768-93 feet, which yielded 1,000 bbls. the first five hours, filling all the tankage on the lease. The well was then shut in.

The second wildcat to find oil in Osage County was the Bay Oil Co.'s (A. G. Oliphant) No. 1, NW cor. NE NW Section 13-27-7, which started flowing at the rate of 120 bbls. of oil an hour. After tankage had been erected on the lease it made approximately 1,200 bbls. a day. The oil was found in the Hominy sand at 2,828-54 feet. It was located approximately 6 miles south of the Peters Petroleum Corp. and others' well and 3½ miles from the nearest other production in the county. At the end of June both of these wildcat wells were being prorated to 50 bbls. of oil per day under proration rules. The strict proration in the area delayed further development.

In Creek County, E. L. Jillson and others' No. 1 Starr, SE cor. NW Section 18-15-8, Depew district, found oil in the Wilcox sand at 3,855-65 feet in November. The well made around 300 bbls. after a shot, opening a new pool, in the county. The well was located on a 400-acre block, one of the first unitized blocks on which a well was drilled on restricted Indian land in Oklahoma. The companies interested in the project, Stanolind Oil & Gas Co., Amerada Petroleum Corp., Sinclair Prairie Oil Co., Mid-Continent Petroleum Corp., and others.

### New Southern Pool

In November, a wildcat test in Jefferson County, in southern Oklahoma, was completed opening a new producing area. The well, Bridwell Oil Co.'s No. 1 Wohlgemuth, NW cor. NE SE Section 30-6s-5w, pumped 28 bbls. of oil the first 12 hours and 48 bbls. of oil the first 24 hours. The oil was found in sand at 1,478-85 feet.

### Deeper Drilling in Logan County

In the old Roxana Field in Logan County, the Shell Petroleum Corp.'s No. 6 McCully, NE cor. SW SE Section 30-19-4w, was drilled deeper and in July a new producing horizon was found that was called the School Land sand, at 6,169-73 feet. The well made 1,100 bbls. of oil in 24 hours and was shut in. The operators in the area agreed to delay further development until October, when the offset lease owners started drilling their wells to this new producing horizon. The second producer was completed the first part of December by L. H. Wentz it made 980 bbls. a day from the School Land sand at 6,178-81 feet. Several other tests were drilling at the close of the year.

Sinclair Prairie Oil Co.'s No. 1 in the C SE NW Section 4-13-1w, Oklahoma County, a wildcat, was started in July on a block of about 2,600 acres and completed in September at a total depth of 6,120 feet in the Wilcox sand as a dry hole.

In the southern part of Grady County the English Drilling Co.'s No. 1 Heenan-Coe, NE cor. SE NE Section 32-3-7w, found a showing of oil in August, in sand at 3,255-80 feet. It was tested and found that it would only make about 10 bbls. of oil a day and some water. It was later drilled to a total depth of 3,504 feet the contract depth and was shut down.

In October, Carter Oil Co., Gypsy Oil Co. and Sinclair Prairie Oil Co. drilled No. 1 Shawbell Community, C SW NE Section 1-12-4w, Oklahoma County, on 400-acre block of leases, about 4½ miles northwest of the Oklahoma City Field. The well reached a total depth of 7,141 feet, and was shut down at the end of the year. It was believed to be running about 600 feet lower than the producing wells in the Oklahoma City Field.

In October, in Lincoln County, the Amerada Petroleum Corp. and others' No. 1 Lafoon, NE cor. SE NE Section 9-13-6, was started on the evidence of a seismograph and was located about 2 miles east of a dry hole. This test was fishing at 4,143 feet at the close of the year.

In November, J. B. Nichols and others' No. 1 Rigney, NE cor. NW SE Section 12-5-9w, Caddo County, was cleaning out to test the deeper formations. It was an old well that has been shut down since December, 1930, after being drilled to a total depth of 3,342 feet. The owners expect to drill the well to the 5,000-foot horizon.

### Commission Kept Busy

The Oklahoma Corporation Commission was keep busy regulating the conditions under which oil was produced. No direct irregularities were unearthed in the production of oil but it was apparent that the wastage of gas would reach a staggering figure. Most of the wasted gas was blown into the air while the wells were producing oil, as there was no market for the gas.

### Oklahoma City Extensions

In March an important extension well was completed in the Oklahoma City Field, giving the operators with leases in the southwestern part of the field renewed hope. A number of wells were completed in that sector and all of them made producers. The producing area was extended by R. A. McArthur's No. 1 Pruitt, NE cor. NW SE, Section 22-11-3w. It made 330 bbls. of oil in nine minutes before cutting out the connection. It was located about a quarter of a mile west of the nearest other production. It was on a town lot and all the lots in the vicinity were leased prior to the drilling of the well.

In April the Phillips Petroleum Co.'s No. 1 Berg, NE cor. SW, Section 26-11-3w, made 50 bbls. of oil in two hours from the Wilcox sand at 6,412-6,595 feet. It extended production a half mile to the south and proved the Wilcox sand extends around the edge of the field on the west from the north end to the south part of the field.

There were only a few sales during the year 1932 of any importance, one was the Tidal Oil Co.'s sale of 400 stripper wells in Washington County, to Fees & Goyt, of Iola, Kans. The wells were reported to have a settled production of 250 bbls. a day and were located in the vicinity of Dewey.

Ramsey Petroleum Co. sold its undivided one-half interest in the No. 1 Messer, C SW SW, Section 32-14-3w, Oklahoma County, and its interest in the block of leases surrounding the well to the Mid-Kansas Oil & Gas Co. in January. The well was completed about two years ago and has been shut in since that time. It is estimated to be a 250-bbl. producer from the Wilcox sand. No consideration was announced.

The discovery of a shallow sand producer in April on the west side of the Oklahoma City Field, indicated that when the Wilcox sand production is exhausted the wells may be plugged back with a chance of obtaining production. The new producing horizon was opened in the southeast end of the field and was found by the Indian Territory Illuminating Oil Co.'s No. 2 Little, NW cor. NE NE, Section 27-11-3w. It swabbed 1,134 bbls. of oil in 22½ hours from the Cleveland sand at 5,771-88 feet.

**OKLAHOMA**

**Completed Wells in 1932 by Counties**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Alfalfa | 2 | 0 | 2 | 0 |
| Atoka | 19 | 33 | 13 | 0 |
| Blaine | 1 | 0 | 1 | 0 |
| Beckham | 2 | 0 | 2 | 0 |
| Bryan | 3 | 0 | 3 | 0 |
| Carter | 34 | 6,505 | 7 | 2 |
| Cotton | 3 | 0 | 2 | 1 |
| Comanche | 4 | 182 | 3 | 0 |
| Caddo | 2 | 103 | 0 | 0 |
| Cherokee | 1 | 0 | 1 | 0 |
| Creek | 219 | 11,630 | 69 | 35 |
| Coal | 3 | 0 | 3 | 0 |
| Greer | 3 | 0 | 3 | 0 |
| Garvin | 2 | 0 | 2 | 0 |
| Grady | 5 | 40 | 3 | 1 |
| Garfield | 1 | 0 | 1 | 0 |
| Hughes | 42 | 8,763 | 7 | 5 |
| Jefferson | 18 | 650 | 4 | 0 |
| Kay | 7 | 391 | 3 | 1 |
| Logan | 3 | 2,085 | 0 | 0 |
| Lincoln | 14 | 2,312 | 7 | 1 |
| Leflore | 2 | 0 | 2 | 0 |
| Love | 3 | 0 | 3 | 0 |
| Latimer | 1 | 0 | 0 | 1 |
| McIntosh | 4 | 0 | 4 | 0 |
| Marshall | 44 | 233 | 13 | 3 |
| Muskogee | 53 | 714 | 26 | 10 |
| McCurtain | 1 | 0 | 1 | 0 |
| Murray | 1 | 0 | 1 | 0 |
| Oklahoma | 136 | 529,301 | 3 | 3 |
| Noble | 6 | 3,540 | 2 | 0 |
| Okmulgee | 76 | 937 | 37 | 12 |
| Okfuskee | 28 | 608 | 7 | 6 |
| Osage | 30 | 2,642 | 12 | 1 |
| Payne | 3 | 8 | 3 | 0 |
| Pawnee | 30 | 484 | 17 | 2 |
| Pottawatomie | 36 | 13,514 | 8 | 0 |
| Pittsburg | 8 | 0 | 2 | 6 |
| Pontotoc | 43 | 3,116 | 9 | 0 |
| Seminole | 71 | 56,291 | 12 | 0 |
| Stephens | 71 | 2,177 | 29 | 8 |
| Texas | 1 | 0 | 1 | 0 |
| Tulsa | 55 | 439 | 36 | 4 |
| Wagoner | 40 | 577 | 24 | 4 |
| Total 1932 | 1,130 | 647,316 | 381 | 106 |

**Summary by Months**

| Month— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 63 | 56,497 | 25 | 11 |
| February | 63 | 76,654 | 17 | 16 |
| March | 79 | 38,126 | 26 | 12 |
| April | 79 | 55,137 | 32 | 7 |
| May | 87 | 63,543 | 31 | 6 |
| June | 74 | 30,617 | 28 | 5 |
| July | 125 | 53,955 | 35 | 11 |
| August | 84 | 88,905 | 24 | 3 |
| September | 117 | 39,042 | 55 | 3 |
| October | 136 | 67,271 | 45 | 11 |
| November | 111 | 38,932 | 34 | 12 |
| December | 114 | 38,608 | 29 | 9 |
| Total 1932 | 1,130 | 647,316 | 381 | 106 |
| Total 1931 | 1,058 | 1,941,805 | 374 | 186 |
| Difference | 72 | 1,294,489 | 7 | 80 |
| Total 1930 | 3,466 | 5,628,234 | 1,002 | 463 |
| Total 1929 | 3,613 | 1,178,945 | 1,245 | 369 |
| Total 1928 | 3,679 | 1,016,000 | 1,327 | 491 |
| Total 1927 | 4,513 | 1,971,081 | 1,443 | 508 |

# Eastern Field Was Dull in 1932 but New Gas Areas Were Found in Two States

By SPECIAL CORRESPONDENT

Outside of natural gas discoveries in New York and northern Pennsylvania the Eastern fields comprised a very dull territory in 1932. A new shallow gas area was opened in Ontario County, New York and the Rathbone Field in Steuben County in the same State was developed to a point where it became an important factor in that part of the State. Over the line in Pennsylvania, Potter County stepped to the front with an important gas area in Hebron Township opened by Robert H. Hungiville and associates with an Oriskany sand gasser. Several other good wells were developed in the vicinity of the discovery well and at the close of the year the field had not been defined. However, only 33 new gas wells were brought in in the New York-Pennsylvania gas field last year as against 122 in 1931.

Curtailment of field operations and proration of production continued throughout the Eastern Field during 1932. In April the orders of the Pennsylvania Grade Curtailment Board were abandoned but pipe line companies and crude oil purchasers immediately began to regulate the amount of oil to be taken from producers. The ratable contract, now greatly in use throughout the area, is serving as an effective curtailment measure.

Wildcat exploration was at a minimum during 1932, no notable mergers were consummated and no important pipe line developments materialized. The year witnessed a constant struggle to keep production in line with demand and to regulate refinery runs.

The extent of curtailment in the Eastern fields during the past three years is indicated by the following comparison:

**EASTERN FIELD**

| Year— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| 1932 | 1,560 | 5,906 | 203 | 270 |
| 1931 | 1,726 | 4,111 | 316 | 679 |
| 1930 | 3,874 | 20,442 | 488 | 667 |

The following table shows the completions by fields for the past two years:

1932

| Field— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Allegany | 145 | 730 | 2 | 2 |
| Bradford | 624 | 1,614 | 0 | 0 |
| Venango-Clarion | 81 | 67 | 9 | 14 |
| Butler-Armstrong | 30 | 33 | 6 | 5 |
| Middle Field | 43 | 113 | 4 | 2 |
| N. Y.-Penn. gas | 69 | 3 | 35 | 33 |
| Southwest Penn. | 74 | 520 | 26 | 20 |
| Southeast Ohio | 240 | 2,166 | 76 | 31 |
| West Virginia | 254 | 660 | 45 | 163 |
| Total | 1,560 | 5,906 | 203 | 270 |

1931

| Field— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Allegany | 106 | 315 | 4 | 1 |
| Bradford | 276 | 485 | 0 | 0 |
| Venango-Clarion | 83 | 72 | 11 | 28 |
| Butler-Armstrong | 32 | 22 | 8 | 11 |
| Middle Field | 26 | 65 | 0 | 0 |
| N. Y.-Penn. gas | 204 | 9 | 82 | 122 |
| Southwest Penn. | 100 | 212 | 26 | 48 |
| Southeast Ohio | 354 | 2,622 | 102 | 90 |
| West Virginia | 535 | 318 | 83 | 379 |
| Total | 1,726 | 4,111 | 316 | 679 |

Eastern Field completions by months during 1932 were as follows:

| Month— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 150 | 622 | 15 | 34 |
| February | 133 | 576 | 21 | 37 |
| March | 113 | 453 | 21 | 17 |
| April | 93 | 391 | 14 | 15 |
| May | 124 | 483 | 16 | 23 |
| June | 125 | 468 | 24 | 21 |
| July | 165 | 737 | 8 | 15 |
| August | 157 | 478 | 15 | 19 |
| September | 123 | 459 | 21 | 11 |
| October | 136 | 447 | 16 | 32 |
| November | 137 | 569 | 18 | 21 |
| December | 104 | 333 | 14 | 25 |
| Total 1932 | 1,560 | 5,906 | 203 | 270 |
| Total 1931 | 1,726 | 4,111 | 316 | 679 |
| Difference | 166 | 1,795 | 113 | 409 |

# Seven Pools Opened in Kansas in 1932, But Five of These Were Held by Lack of Demand

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

In Kansas the year 1932 was featured by the discovery of one major producing area and the development of another that was discovered late in 1931. Both areas are producing from the Hunton lime, a new producing formation for the State of Kansas.

In McPherson County the Mabee Pool was discovered in October by J. E. Mabee, Inc.'s Hunton lime well, in Section 33-21-3w. In Harvey County the Hollow Pool was developed until it was among the important flush fields in the State.

Seven new pools were discovered in Kansas in 1932, one of which was a gas field. In one of the older producing fields a new horizon was found productive. Two new pools were located in McPherson County; the others were located, two in Rice, two in Ellsworth and the other in Finney County.

### Opening of Johnson Pool

The first discovery in 1932 was the Johnson Pool, in McPherson County, in February. It was the seventh pool found in the county. The discovery well was Shell Petroleum Corp.'s No. 1 Johnson, SW cor. SE, Section 35-19-3w, which found oil and gas in chat at 2,984-94 feet. It first started showing gas estimated at 1,000,000 feet a day and was shut in. The crew was preparing to drill it deeper when it suddenly blew in and caught fire. The flow of gas unexpectedly increased and broke out through the 12-inch and 14-inch casing. The well was brought under control after the fire had destroyed the derrick. It was then drilled deeper to a total depth of 3,007 feet, still in chat formation, making 10,000,000 feet of gas and 120 bbls. of oil a day.

The development of the Johnson Pool extended in all directions from the discovery well and the production was extended to within a few hundred feet of the townsite of McPherson and one well was drilled on a townsite lot. The development was retarded by the lack of pipe line demand and an outlet for the oil.

The largest well completed in the pool was the Mid-Kansas Oil & Gas Co.'s No. 1 Bridgen, NE cor. NW SE, Section 2-20-3w, completed in May. The well swabbed 1,495 bbls. of oil the first 12 hours, from chat at 2,976-3,030 feet.

### Mabee Pool Discovery

The next discovery was the Mabee Pool, in McPherson County. J. E. Mabee, Inc.'s No. 1 Nickel, NE cor. SW, Section 33-21-3w, located about 1½ miles south of production in the Voshell Pool, was completed in October, and it opened a new producing formation for McPherson County, the Hunton lime. The first well began making 20 bbls. of oil an hour at 1 foot in the pay. It drilled itself in, the production increasing to 50 bbls. an hour. This well did not find the chat formation. The 6-inch casing was landed at 3,342 feet with the total depth 3,467 feet.

### Chase Townsite Pool

In December a new producing area was discovered in the Chase townsite in Rice County, making it the seventh pool found in that county. The discovery well was Roy Ramsey and others' No. 1 School lot, NW cor. SW NW, Section 32-19-9w. It was completed for 295 bbls. of oil from the Siliceous lime at 3,246-85 feet, after a shot. The well is located on a 12-acre tract on the north edge of the townsite. It was located on the Barton-Ellsworth arch. Because of it being on a small tract of land four offsets may be forced in the near future. It also provides an additional income for the Chase Rural High School, as it was drilled on the school's land.

### Gas in Finney County

A new gas area was found in the western part of the State in December when L. F. Meyers and J. E. Denham's No. 1 Brown, C SW, Section 16-25-34w, Finney County, made 5,500,000 feet of gas a day at 2,635-2,715 feet. It is the first producing well in the county. This well is located about 60 miles north of the Hugoton gas field, in Stevens, Morton and Haskell Counties. Some predict that these two gas producing areas may join. The well was drilled on a block of 37,000 acres, all owned by the same interests.

Another deep test well was drilled in the northern part of Finney County to a total depth of 5,970 feet but it was completed as a dry hole. The National Refining Co. drilled this test in Section 13-23-30w.

### Hollow Pool's Two Pays

In October a new producing horizon was found in the Hollow Pool in Harvey County, by Frost, Study and Lloyd's No. 1 Martens, in Section 19-22-3w. This well found the pay in the chat formation at 3,195-3,308 feet, and was estimated as a 5,000-bbl. initial producer. All of the other producing wells in this field found oil in the Hunton lime.

The Hollow Pool, in Harvey County, was discovered in December, 1931, and

## Kansas

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Tll. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEDGWICK COUNTY: | | | | | | | | | | | | | |
| Wright— | | | | | | | | | | | | | |
| Daily average | 4,186 | 3,915 | 4,085 | 4,076 | 3,695 | 3,710 | 3,505 | 3,639 | 3,303 | 3,242 | 3,316 | 3,267 | |
| Month | 129,766 | 113,535 | 126,635 | 122,280 | 114,545 | 111,300 | 108,655 | 112,809 | 99,090 | 100,502 | 99,480 | 101,277 | 1,339,874 |
| Greenwich— | | | | | | | | | | | | | |
| Daily average | 2,736 | 2,486 | 2,676 | 2,660 | 3,082 | 3,079 | 3,243 | 3,213 | 3,863 | 4,119 | 3,908 | 3,880 | |
| Month | 84,816 | 72,094 | 82,956 | 79,800 | 95,542 | 92,370 | 100,532 | 102,703 | 115,890 | 127,689 | 117,240 | 120,280 | 1,191,913 |
| Robbins— | | | | | | | | | | | | | |
| Daily average | 231 | 218 | 221 | 219 | 204 | 206 | 148 | 155 | 138 | 140 | 145 | 144 | |
| Month | 7,161 | 6,322 | 6,851 | 6,570 | 6,324 | 6,180 | 4,588 | 4,836 | 4,140 | 4,340 | 4,350 | 4,464 | 66,126 |
| Eastborough— | | | | | | | | | | | | | |
| Daily average | 7,115 | 6,642 | 5,876 | 5,919 | 4,774 | 4,746 | 3,688 | 3,535 | 3,321 | 3,052 | 2,777 | 2,761 | |
| Month | 220,565 | 192,618 | 182,156 | 177,570 | 147,994 | 142,380 | 114,328 | 109,585 | 99,630 | 94,642 | 83,310 | 85,591 | 1,650,370 |
| Miscellaneous— | | | | | | | | | | | | | |
| Daily average | 814 | 874 | 1,173 | 1,065 | 978 | 972 | 472 | 657 | 659 | 629 | 614 | 611 | |
| Month | 25,234 | 25,346 | 36,363 | 31,950 | 30,318 | 29,160 | 14,632 | 20,367 | 19,770 | 19,499 | 18,420 | 18,941 | 290,000 |
| MARION COUNTY: | | | | | | | | | | | | | |
| Florence-Urschel— | | | | | | | | | | | | | |
| Daily average | 148 | 173 | 154 | 160 | 174 | 171 | 99 | 121 | 134 | 115 | 130 | 126 | |
| Month | 4,588 | 5,017 | 4,774 | 4,800 | 5,394 | 5,130 | 3,069 | 3,751 | 4,020 | 3,565 | 3,900 | 3,906 | 51,914 |
| Peabody— | | | | | | | | | | | | | |
| Daily average | 384 | 396 | 427 | 399 | 378 | 383 | 366 | 427 | 374 | 339 | 359 | 348 | |
| Month | 11,904 | 11,484 | 13,237 | 11,970 | 11,718 | 11,490 | 11,346 | 13,237 | 11,220 | 10,509 | 10,770 | 10,788 | 139,673 |
| Covert-Sellers— | | | | | | | | | | | | | |
| Daily average | 439 | 431 | 305 | 311 | 389 | 382 | 345 | 353 | 400 | 334 | 358 | 357 | |
| Month | 13,609 | 12,499 | 9,455 | 9,330 | 12,059 | 11,460 | 10,695 | 10,943 | 12,000 | 10,354 | 10,740 | 11,067 | 134,211 |
| Lost Springs— | | | | | | | | | | | | | |
| Daily average | 561 | 561 | 538 | 529 | 496 | 486 | 467 | 446 | 426 | 395 | 375 | 381 | |
| Month | 17,391 | 16,269 | 16,678 | 15,870 | 15,376 | 14,580 | 14,477 | 13,826 | 12,780 | 12,245 | 11,250 | 11,811 | 172,553 |
| Davis— | | | | | | | | | | | | | |
| Daily average | 465 | 492 | 472 | 461 | 467 | 464 | 437 | 440 | 439 | 420 | 422 | 416 | |
| Month | 14,415 | 14,268 | 14,632 | 13,830 | 14,477 | 13,920 | 13,547 | 13,640 | 13,170 | 13,020 | 12,660 | 12,896 | 164,475 |
| BUTLER COUNTY: | | | | | | | | | | | | | |
| Elbing— | | | | | | | | | | | | | |
| Daily average | 1,528 | 1,491 | 1,505 | 1,496 | 1,609 | 1,547 | 1,549 | 1,525 | 1,483 | 1,441 | 1,425 | 1,433 | |
| Month | 47,678 | 43,239 | 46,655 | 44,880 | 49,879 | 46,410 | 48,019 | 47,275 | 44,490 | 44,671 | 42,750 | 44,423 | 550,369 |
| Potwin— | | | | | | | | | | | | | |
| Daily average | 321 | 400 | 306 | 314 | 302 | 307 | 315 | 304 | 315 | 306 | 295 | 291 | |
| Month | 9,951 | 11,600 | 9,486 | 9,420 | 9,362 | 9,210 | 9,765 | 9,424 | 9,450 | 9,486 | 8,850 | 9,021 | 115,025 |
| South Augusta— | | | | | | | | | | | | | |
| Daily average | 856 | 769 | 827 | 811 | 836 | 831 | 824 | 784 | 771 | 799 | 778 | 757 | |
| Month | 26,536 | 22,301 | 25,647 | 24,330 | 25,916 | 24,930 | 25,544 | 24,304 | 23,130 | 24,769 | 23,340 | 23,467 | 294,514 |
| North Augusta— | | | | | | | | | | | | | |
| Daily average | 886 | 937 | 802 | 813 | 860 | 854 | 861 | 853 | 796 | 697 | 698 | 709 | |
| Month | 27,466 | 24,373 | 24,862 | 24,390 | 26,660 | 25,620 | 24,831 | 26,443 | 23,880 | 21,607 | 20,940 | 21,979 | 292,951 |
| Towanda— | | | | | | | | | | | | | |
| Daily average | 1,359 | 1,378 | 1,410 | 1,390 | 1,381 | 1,383 | 1,345 | 1,446 | 1,420 | 1,419 | 1,331 | 1,342 | |
| Month | 42,129 | 39,962 | 43,710 | 41,700 | 42,811 | 41,490 | 41,695 | 44,826 | 42,600 | 43,989 | 39,930 | 41,602 | 506,444 |
| Cameron-Robinson— | | | | | | | | | | | | | |
| Daily average | 463 | 492 | 439 | 441 | 449 | 443 | 474 | 417 | 494 | 417 | 423 | 423 | |
| Month | 14,353 | 14,268 | 13,609 | 13,230 | 13,919 | 13,290 | 14,694 | 12,927 | 14,820 | 12,927 | 12,990 | 13,268 | 164,295 |
| Sluss— | | | | | | | | | | | | | |
| Daily average | 129 | 122 | 136 | 127 | 142 | 137 | 163 | 139 | 134 | 133 | 133 | 133 | |
| Month | 3,999 | 3,538 | 4,216 | 3,810 | 4,402 | 4,110 | 5,053 | 4,309 | 4,020 | 4,278 | 3,990 | 4,122 | 49,848 |
| Nuttle-Koogler— | | | | | | | | | | | | | |
| Daily average | 2,354 | 2,301 | 2,327 | 2,311 | 2,325 | 2,316 | 2,270 | 2,300 | 2,183 | 2,113 | 2,056 | 2,090 | |
| Month | 72,974 | 66,729 | 72,137 | 69,330 | 72,075 | 69,480 | 70,370 | 71,300 | 65,490 | 65,503 | 61,680 | 64,790 | 821,859 |
| Wilson-Dunkle— | | | | | | | | | | | | | |
| Daily average | 1,276 | 1,199 | 1,261 | 1,210 | 1,286 | 1,267 | 1,238 | 1,183 | 1,258 | 1,164 | 1,131 | 1,133 | |
| Month | 39,556 | 34,771 | 39,091 | 36,300 | 39,866 | 38,010 | 38,378 | 36,673 | 37,740 | 36,084 | 33,930 | 35,123 | 445,522 |
| Eldorado— | | | | | | | | | | | | | |
| Daily average | 6,062 | 5,793 | 5,845 | 5,919 | 5,888 | 5,869 | 5,086 | 5,150 | 4,949 | 4,840 | 4,810 | 4,792 | |
| Month | 187,922 | 167,997 | 181,195 | 174,570 | 182,525 | 176,070 | 157,666 | 159,650 | 148,470 | 150,040 | 144,300 | 148,552 | 1,978,960 |
| Smock— | | | | | | | | | | | | | |
| Daily average | 163 | 154 | 165 | 160 | 171 | 166 | 160 | 163 | 161 | 154 | 161 | 160 | |
| Month | 5,053 | 4,466 | 5,115 | 4,800 | 5,301 | 4,980 | 4,960 | 5,053 | 4,830 | 4,774 | 4,830 | 4,960 | 59,122 |

(Continued on Next Page)

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| LINDSAY-McMILLAN COMPANY | Milwaukee, Wis. |
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| Name | Headquarters |
|---|---|
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| AUTO GAS AND SUPPLY COMPANY | Winona, Minn. |
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# Cities Service Oils and Gasolene

it soon became an important producing area after many years of wildcatting in the county. During 1932 there were 14 wells completed in the pool, with an estimated potential of 30,000 bbls. a day.

The discovery well was F. Hollow's No. 1 Church Acre, SW cor. NW, Section 20-22-3w, which was completed for 450 bbls. a day in December, 1931, and was later drilled deeper to 3,512 feet, where it made 1,450 bbls. in 24 hours. This well was drilled on a lease less than an acre in size, resulting in the other wells being closely spaced.

This pool is located on the Abilene arch, the same as the Voshell Pool, located several miles to the northeast in McPherson County.

### State's Largest Gasser

The State's largest gas well was completed in April in Reno County. It was Olson Oil Co. and Shell Petroleum Corp.'s No. 1 Goering, C NE SW, Section 25-23-4w. The well gauged 86,500,000 feet of gas a day, with a rock pressure of 1,170 pounds, from the chat formation at 3,237-3,392 feet.

### In Ellsworth County

In January an extension well was completed in Ellsworth County, in the Siliceous lime, adding another producing area to already numerous areas along the Barton-Ellsworth arch. The well was Allison-Fitzwilliam Petroleum Corp.'s No. 1 Stratman, C SW SE, Section 23-16-10w, estimated at 1,000 bbls. a day. The oil was found in the Siliceous lime at 3,388-91 feet. The well was shut in during the first seven months of the year and later was produced at the rate of 100 bbls. a day. It was the only well completed in the area during the year. It is known as the north Stratman Pool.

The Stratman Pool, in Ellsworth County, was discovered in April, 1931, and was extended and developed during 1932. As the year closed there were 10 producing wells in the pool, with a potential production of 10,452 bbls. a day, located in Sections 1 and 12-17-10w. The production from these wells was shipped by a pipe line to a loading rack during part of the year and the balance of the time it was shut in. The pool became next to the largest pool along the Barton-Ellsworth arch. Its limits have not been defined, but the future development has been delayed until the operators find an outlet for the oil. The potential production of the wells ranges from 1,000 to 2,000 bbls. daily.

In August a wildcat in Ellsworth County found a showing of oil in the Kansas City-Lansing lime, estimated at 100 bbls. an hour. It was the largest well in the western part of the State in this formation. The well was Slick, Pryor and Lockhart's No. 1 Breford, SW cor. NW, Section 7-17-10w, 6 miles from the nearest production. On a pumping test the well gauged 720 bbls. in 10 hours. The pay was found at 3,140-52 feet. The owners later decided to drill deeper to the Siliceous lime. The well was recompleted for 720 bbls. a day from the Siliceous lime at 3,371-3,407 feet. The production from the Kansas City-Lansing lime was bradenheaded through the 6 and 8-inch casing. This well remained shut in during the balance of the year.

### Barton County Held Back

Barton County had promising prospects at the beginning of the year, but in February the first disappointment occured in the southeastern part of the county in the Isern Pool when water was found in a well 990 feet from the discovery well. Midwest Refining Co.'s No. 1 Berscheidt, C NW SE, Section 12-20-11w, found water in the Siliceous lime at 3,293-3,345 feet. The well was located in the center of a 40-acre tract at the suggestion of the Kansas Public Service Commission, which at that time was trying to inaugurate a policy of drilling one well to 40 acres in the central western part of the State.

The direct offset to the south of the discovery well was the Derby Oil Co.'s No. 1 Berscheidt, NW cor. NE SE, Section 12-20-11w, which made a 200-bbl. pumper. It was drilled to the Siliceous lime at a total depth of 3,329 feet.

### Rice County's New Pools

Oil was discovered in Rice County about three years ago in the Raymond or Schurr Pool, and there are now six pools in the county, and with the exception of the Raymond, Sharpe and Beyer Pools, all the others are one-well pools. The Sharpe and Beyer Pools were the only pools that had any development during the year.

In March, the Gypsy Oil Co.'s No. 1 Steckel, C NE NW, Section 33-19-10w, Rice County, found oil in the Siliceous lime at 3,312-24 feet and was first estimated at 700 bbls. a day. The well was shut in and was without any pipe line connection during the rest of the year. It was drilled on a block of 1,000 acres, the same company owning all the offset leases. The well was located about 2½ miles northeast of the Isern Pool, in Barton County.

### Stafford County

Only one well was added to the Richardson Pool, in Stafford County in 1932. It was the Stanolind Oil & Gas Co.'s No. 29 Allen, C SW SW, Section 31-22-11w, which was completed for 1,065 bbls. of oil a day from the Siliceous lime at 3,534-60 feet. This pool has three other producing wells. The Richardson Pool has a potential of 4,900 bbls. a day. All of the wells are shut in awaiting a market outlet.

### Rush County's New Gas Wells

Rush County development was delayed during the year. This county is the most westerly along the Barton-Ellsworth arch. A number of large gas wells were completed during the year and they were shut in awaiting a market outlet. The only oil production was the Dewey & Mitchell's No. 1 Greenawalt, in Section 17-19-16w,

## Kansas (Continued)

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Leon-Weaver— | | | | | | | | | | | | | |
| Daily average | 2,589 | 2,447 | 2,366 | 2,373 | 2,495 | 2,388 | 2,281 | 2,233 | 2,115 | 2,057 | 2,015 | 2,026 | |
| Month | 80,259 | 70,983 | 73,346 | 71,190 | 77,345 | 71,640 | 70,711 | 69,378 | 63,450 | 63,767 | 60,450 | 62,806 | 835,305 |
| Fox-Rush— | | | | | | | | | | | | | |
| Daily average | 782 | 688 | 730 | 716 | 805 | 760 | 740 | 792 | 754 | 732 | 745 | 727 | |
| Month | 24,242 | 19,962 | 22,320 | 21,480 | 25,043 | 22,800 | 22,940 | 24,552 | 22,620 | 22,692 | 22,350 | 22,547 | 273,843 |
| Douglass— | | | | | | | | | | | | | |
| Daily average | 95 | 95 | 97 | 94 | 103 | 99 | 97 | 104 | 102 | 96 | 94 | 95 | |
| Month | 2,945 | 2,755 | 3,007 | 2,820 | 3,193 | 2,970 | 3,007 | 3,224 | 3,060 | 2,976 | 2,820 | 2,945 | 35,722 |
| Keighly— | | | | | | | | | | | | | |
| Daily average | 267 | 325 | 280 | 274 | 338 | 310 | 325 | 293 | 236 | 279 | 261 | 254 | |
| Month | 8,277 | 9,425 | 8,680 | 8,220 | 10,478 | 9,306 | 10,075 | 9,083 | 7,080 | 8,649 | 7,830 | 7,874 | 104,971 |
| Benton— | | | | | | | | | | | | | |
| Daily average | 48 | 44 | 44 | 45 | 49 | 47 | 51 | 52 | 50 | 54 | 48 | 49 | |
| Month | 1,488 | 1,276 | 1,364 | 1,350 | 1,519 | 1,410 | 1,581 | 1,612 | 1,500 | 1,674 | 1,440 | 1,519 | 17,733 |
| Blankenship— | | | | | | | | | | | | | |
| Daily average | 377 | 380 | 345 | 362 | 361 | 363 | 391 | 380 | 435 | 387 | 366 | 372 | |
| Month | 11,687 | 11,020 | 10,695 | 10,860 | 11,191 | 10,890 | 12,121 | 11,780 | 13,050 | 11,997 | 10,980 | 11,532 | 137,803 |
| GREENWOOD AND WOODSON COUNTIES: | | | | | | | | | | | | | |
| Sallyards— | | | | | | | | | | | | | |
| Daily average | 745 | 779 | 778 | 753 | 864 | 797 | 763 | 806 | 788 | 787 | 738 | 719 | |
| Month | 23,095 | 22,591 | 24,118 | 22,590 | 26,784 | 23,910 | 23,653 | 24,986 | 23,640 | 24,397 | 22,140 | 22,289 | 284,193 |
| Tester— | | | | | | | | | | | | | |
| Daily average | 2,824 | 2,761 | 2,657 | 2,593 | 2,758 | 2,742 | 2,687 | 2,759 | 2,690 | 2,631 | 2,576 | 2,562 | |
| Month | 87,544 | 80,069 | 82,367 | 77,790 | 85,498 | 82,260 | 83,297 | 85,260 | 80,700 | 81,561 | 77,280 | 79,422 | 983,038 |
| Virgil— | | | | | | | | | | | | | |
| Daily average | 3,495 | 3,518 | 3,537 | 3,510 | 3,686 | 3,674 | 3,613 | 3,818 | 3,606 | 3,842 | 3,764 | 3,714 | |
| Month | 108,345 | 102,022 | 109,647 | 105,300 | 114,266 | 110,220 | 112,003 | 118,358 | 108,180 | 119,102 | 112,920 | 115,134 | 1,335,497 |
| Thrall-Burkett— | | | | | | | | | | | | | |
| Daily average | 760 | 753 | 744 | 738 | 867 | 870 | 820 | 784 | 761 | 761 | 683 | 689 | |
| Month | 23,560 | 21,837 | 23,064 | 22,140 | 26,877 | 26,100 | 25,420 | 24,304 | 22,830 | 23,591 | 20,490 | 21,359 | 281,572 |
| Sealey— | | | | | | | | | | | | | |
| Daily average | 4,535 | 4,219 | 4,258 | 4,193 | 4,280 | 4,262 | 4,497 | 4,353 | 4,201 | 4,204 | 4,018 | 4,020 | |
| Month | 140,585 | 122,351 | 131,998 | 125,790 | 132,680 | 127,860 | 139,407 | 134,943 | 126,030 | 130,324 | 120,540 | 124,620 | 1,557,128 |
| Polhamus— | | | | | | | | | | | | | |
| Daily average | 535 | 509 | 482 | 477 | 582 | 570 | 497 | 547 | 503 | 529 | 516 | 517 | |
| Month | 16,585 | 14,761 | 14,942 | 14,310 | 18,042 | 17,100 | 15,407 | 16,957 | 15,090 | 16,399 | 15,480 | 16,027 | 191,100 |
| Miscellaneous— | | | | | | | | | | | | | |
| Daily average | 642 | 622 | 621 | 604 | 640 | 641 | 630 | 644 | 655 | 662 | 614 | 611 | |
| Month | 19,902 | 18,067 | 19,251 | 18,120 | 19,840 | 19,230 | 19,530 | 19,964 | 19,650 | 20,553 | 18,420 | 18,941 | 231,468 |
| COWLEY COUNTY: | | | | | | | | | | | | | |
| Rainbow Bend— | | | | | | | | | | | | | |
| Daily average | 1,263 | 1,264 | 1,265 | 1,257 | 1,363 | 1,351 | 1,291 | 1,346 | 1,232 | 1,194 | 1,332 | 1,202 | |
| Month | 39,153 | 36,656 | 39,215 | 37,710 | 42,253 | 40,530 | 40,021 | 41,726 | 36,960 | 37,014 | 36,990 | 37,262 | 465,490 |
| Slick— | | | | | | | | | | | | | |
| Daily average | 328 | 341 | 342 | 338 | 329 | 324 | 328 | 325 | 322 | 315 | 309 | 307 | |
| Month | 10,168 | 9,889 | 10,633 | 10,140 | 10,199 | 9,720 | 10,168 | 10,075 | 9,660 | 9,765 | 9,270 | 9,517 | 119,204 |
| Graham— | | | | | | | | | | | | | |
| Daily average | 219 | 215 | 205 | 210 | 211 | 210 | 218 | 226 | 219 | 211 | 184 | 191 | |
| Month | 6,789 | 6,235 | 6,355 | 6,300 | 6,541 | 6,300 | 6,758 | 7,006 | 6,570 | 6,541 | 5,520 | 5,921 | 76,836 |
| Rock— | | | | | | | | | | | | | |
| Daily average | 120 | 107 | 108 | 103 | 120 | 121 | 106 | 113 | 103 | 77 | 124 | 125 | |
| Month | 3,720 | 3,103 | 3,348 | 3,090 | 3,720 | 3,630 | 3,286 | 3,503 | 3,090 | 2,387 | 3,720 | 3,875 | 40,472 |
| Clark— | | | | | | | | | | | | | |
| Daily average | 127 | 112 | 120 | 114 | 119 | 117 | 114 | 111 | 104 | 95 | 107 | 102 | |
| Month | 3,937 | 3,248 | 3,720 | 3,420 | 3,689 | 3,510 | 3,534 | 3,441 | 3,120 | 2,945 | 3,210 | 3,162 | 40,936 |
| Eastman— | | | | | | | | | | | | | |
| Daily average | 328 | 334 | 262 | 262 | 331 | 318 | 304 | 306 | 235 | 307 | 325 | 330 | |
| Month | 10,013 | 9,686 | 8,122 | 7,890 | 10,261 | 9,540 | 9,424 | 9,486 | 10,050 | 9,517 | 9,750 | 10,230 | 113,969 |
| Winfield-New Salem— | | | | | | | | | | | | | |
| Daily average | 4,052 | 4,030 | 4,274 | 5,986 | 5,133 | 3,916 | 5,234 | 5,339 | 4,258 | 3,228 | 3,304 | 3,247 | |
| Month | 125,612 | 116,870 | 132,494 | 179,580 | 159,123 | 117,480 | 162,254 | 165,509 | 127,740 | 100,068 | 99,120 | 100,657 | 1,586,507 |
| Miscellaneous— | | | | | | | | | | | | | |
| Daily average | 728 | 802 | 774 | 750 | 878 | 860 | 910 | 944 | 880 | 694 | 831 | 772 | |
| Month | 22,568 | 23,258 | 23,994 | 22,500 | 27,218 | 25,800 | 28,210 | 29,264 | 26,400 | 21,514 | 24,930 | 23,932 | 299,588 |
| McPHERSON COUNTY: | | | | | | | | | | | | | |
| Ritz-Canton— | | | | | | | | | | | | | |
| Daily average | 12,743 | 12,281 | 12,645 | 11,819 | 13,120 | 11,462 | 11,842 | 13,135 | 17,689 | 14,937 | 16,083 | 13,008 | |
| Month | 395,033 | 356,149 | 391,995 | 354,570 | 406,720 | 343,890 | 367,102 | 407,185 | 530,670 | 463,047 | 482,490 | 403,248 | 4,902,099 |
| Voshell— | | | | | | | | | | | | | |
| Daily average | 9,396 | 7,871 | 7,284 | 8,112 | 7,609 | 6,112 | 6,734 | 6,725 | 6,664 | 7,300 | 8,222 | 6,710 | |
| Month | 288,176 | 228,259 | 225,804 | 243,360 | 235,879 | 183,390 | 208,754 | 208,475 | 199,920 | 226,300 | 246,660 | 208,010 | 2,702,987 |
| Johnson— | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | 492 | 356 | 423 | 324 | 492 | 475 | 483 | |
| Month | ..... | ..... | ..... | ..... | ..... | 14,760 | 11,036 | 13,113 | 9,720 | 15,252 | 14,250 | 14,972 | 93,104 |
| Miscellaneous— | | | | | | | | | | | | | |
| Daily average | 89 | 101 | 107 | 99 | 378 | 510 | 68 | 44 | 90 | 42 | 65 | 65 | |
| Month | 2,758 | 2,881 | 3,317 | 2,970 | 11,718 | 15,300 | 2,046 | 1,364 | 2,700 | 1,302 | 1,950 | 2,016 | 50,022 |

(Continued on Next Page)

which had a potential of 20 bbls. a day. It was completed in September, 1931. The well was shut in until the middle of 1932 and the oil was then shipped out in tank cars from a loading rack from the townsite of Shaffer.

### Important Find in Kingman

Kingman County furnished the most westerly Siliceous lime producer in the State in 1932, considered an important find notwithstanding the presence of water with the oil. The well was Skelly Oil Co.'s No. 1 Liesman, in Section 30-27-10w, a wildcat test which flowed 45 bbls. of oil the first hour and 25 bbls. of oil an hour for 12 hours, along with an estimated 20,000,000 feet of gas a day from Siliceous lime at 4,093-4,195 feet.

The Siliceous lime well also found oil production in the Kansas City-Lansing lime and in the Wilcox sand at 4,019-55 feet. The Viola lime carried what was estimated to be 26,000,000 feet of gas a day at 3,922-58 feet. It resulted in a leasing campaign in the area surrounding the 21,000-acre block of the Skelly Oil Co.

### Winfield Townsite

In May a good-sized producer on the east side of the Winfield townsite led to an active townsite development. The first well on the east side of the townsite prior to the development was Sinclair Prairie Oil Co.'s No. 2 Dibbens, in Section 22-32-4, on Block 12, Lot 5, which swabbed 885 bbls. of oil in 24 hours from the Siliceous lime at 3,251-62 feet.

Activity continued on the townsite until more than a score of wells were drilling. The activity spread south to the campus of Southwestern College. The production from wells on the townsite was from two horizons, one around 2,300 feet and the other the Siliceous lime at 3,250 feet.

The production from the townsite increased until September when it was necessary for the operators to voluntarily prorate the wells on account of limited market demand. The production from wells on the townsite was estimated at that time at 4,000 bbls. daily.

The older areas in the State were quiet with the exception of some scattered development and extensions in Greenwood County.

### Largest Well in Kansas

The State's largest well was completed in the Ritz-Canton-Decker Field in July for 14,300 bbls. a day. It was Dickey Oil Co.'s No. 4 Decker, NW cor. SE, Section 35-19-2w.

The Ritz-Canton-Decker Field was extended several times during the year by the completion of new wells. A new producing horizon was found on the southeast edge of the field in December by Tom Palmer and others' No. 1 Winn, SE cor. NW, Section 7-20-1w, which was completed for 996 bbls. a day from the Wilcox sand at 3,440-44 feet. The well was an old Viola lime producer drilled deeper.

### KANSAS

**Completed Wells in 1932 by Counties**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Barton | 6 | 708 | 4 | 0 |
| Barber | 1 | 0 | 1 | 0 |
| Butler | 12 | 160 | 6 | 2 |
| Chautauqua | 3 | 5 | 0 | 1 |
| Chase | 6 | 200 | 3 | 1 |
| Cowley | 72 | 11,842 | 16 | 3 |
| Coffey | 3 | 60 | 2 | 0 |
| Dickinson | 1 | 0 | 1 | 0 |
| Douglas | 4 | 0 | 4 | 0 |
| Elk | 4 | 5 | 3 | 0 |
| Edwards | 1 | 0 | 1 | 0 |
| Ellsworth | 25 | 16,991 | 9 | 1 |
| Ellis | 1 | 50 | 0 | 0 |
| Finney | 1 | 0 | 1 | 0 |
| Ford | 1 | 0 | 1 | 0 |
| Greenwood | 95 | 5,762 | 51 | 9 |
| Harvey | 20 | 19,072 | 3 | 0 |
| Jefferson | 1 | 0 | 1 | 0 |
| Kingman | 5 | 430 | 1 | 0 |
| Leavenworth | 1 | 0 | 1 | 0 |
| Marion | 5 | 0 | 5 | 0 |
| Marshall | 1 | 0 | 1 | 0 |
| Morris | 3 | 35 | 2 | 0 |
| McPherson | 151 | 106,248 | 23 | 8 |
| Osage | 2 | 0 | 2 | 0 |
| Phillips | 1 | 0 | 1 | 0 |
| Reno | 19 | 3,804 | 4 | 1 |
| Rice | 38 | 16,130 | 6 | 1 |
| Rawlins | 1 | 0 | 1 | 0 |
| Rush | 4 | 0 | 2 | 2 |
| Russell | 4 | 305 | 3 | 0 |
| Rooks | 1 | 0 | 1 | 0 |
| Sheridan | 1 | 0 | 1 | 0 |
| Saline | 1 | 0 | 1 | 0 |
| Sedgwick | 54 | 14,241 | 17 | 1 |
| Sumner | 6 | 0 | 6 | 0 |
| Stafford | 6 | 2,225 | 2 | 0 |
| Woodson | 10 | 906 | 2 | 1 |
| Total 1932 | 572 | 193,139 | 188 | 31 |

**Summary by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 42 | 13,980 | 11 | 4 |
| February | 37 | 17,004 | 15 | 0 |
| March | 30 | 7,522 | 6 | 2 |
| April | 43 | 14,556 | 12 | 1 |
| May | 35 | 16,499 | 18 | 0 |
| June | 44 | 12,948 | 16 | 2 |
| July | 72 | 48,993 | 19 | 2 |
| August | 44 | 11,517 | 12 | 2 |
| September | 54 | 11,462 | 14 | 2 |
| October | 63 | 13,328 | 22 | 4 |
| November | 54 | 10,006 | 21 | 2 |
| December | 55 | 15,324 | 23 | 0 |
| Total 1932 | 572 | 193,139 | 188 | 31 |
| Total 1931 | 470 | 144,921 | 129 | 112 |
| Difference | 102 | 48,218 | 59 | 81 |
| Total 1930 | 1,026 | 228,296 | 423 | 168 |
| Total 1929 | 1,058 | 165,511 | 453 | 52 |
| Total 1928 | 1,157 | 101,043 | 455 | 115 |

## Kansas (Continued)

**Daily Average and Monthly Production of Crude Oil in 1932**

| OTHER COUNTIES: | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Tl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trego— | | | | | | | | | | | | | |
| Daily average | 2 | 2 | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| Month | 62 | 58 | ..... | 60 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 180 |
| Rooks— | | | | | | | | | | | | | |
| Daily average | 146 | 138 | 168 | 146 | 135 | 137 | 134 | 131 | 123 | 123 | 119 | 117 | |
| Month | 4,526 | 4,002 | 5,208 | 4,380 | 4,185 | 4,110 | 4,154 | 4,061 | 3,690 | 3,813 | 3,300 | 3,627 | 49,056 |
| Sumner— | | | | | | | | | | | | | |
| Daily average | 4,721 | 4,820 | 4,733 | 4,415 | 5,049 | 4,992 | 4,241 | 4,303 | 4,221 | 4,042 | 4,080 | 3,614 | |
| Month | 146,351 | 139,780 | 146,723 | 132,450 | 156,519 | 149,760 | 131,471 | 133,393 | 126,630 | 125,302 | 122,400 | 112,034 | 1,622,813 |
| Rice— | | | | | | | | | | | | | |
| Daily average | 3,005 | 2,919 | 3,004 | 3,115 | 1,838 | 1,706 | 1,550 | 3,304 | 2,703 | 1,745 | 1,927 | 1,358 | |
| Month | 93,155 | 84,651 | 93,124 | 93,450 | 56,978 | 51,180 | 48,050 | 102,424 | 81,090 | 54,095 | 57,810 | 42,098 | 858,105 |
| Russell— | | | | | | | | | | | | | |
| Daily average | 2,556 | 2,548 | 2,803 | 2,874 | 2,809 | 2,811 | 2,421 | 2,546 | 2,365 | 2,254 | 2,318 | 2,297 | |
| Month | 79,236 | 73,892 | 86,893 | 86,220 | 87,079 | 84,330 | 75,051 | 78,926 | 70,950 | 69,874 | 69,540 | 71,207 | 933,198 |
| Reno— | | | | | | | | | | | | | |
| Daily average | 204 | 207 | 229 | 277 | 484 | 428 | 876 | 1,322 | 1,670 | 1,815 | 1,545 | 1,611 | |
| Month | 6,324 | 6,003 | 7,099 | 8,310 | 15,004 | 12,840 | 27,156 | 40,982 | 50,100 | 56,265 | 46,350 | 49,941 | 326,374 |
| Harvey— | | | | | | | | | | | | | |
| Daily average | 160 | 143 | 150 | 155 | 379 | 526 | 1,351 | 2,405 | 1,689 | 1,627 | 803 | 815 | |
| Month | 4,960 | 4,147 | 4,650 | 4,650 | 11,749 | 15,780 | 41,881 | 74,555 | 50,670 | 50,747 | 24,090 | 28,365 | 316,344 |
| Chautauqua— | | | | | | | | | | | | | |
| Daily average | 1,753 | 1,746 | 1,750 | 1,739 | 838 | 1,510 | 1,677 | 857 | 1,916 | 1,630 | 1,565 | 1,645 | |
| Month | 54,343 | 50,634 | 54,250 | 52,170 | 25,978 | 45,300 | 51,987 | 26,567 | 30,480 | 50,530 | 46,950 | 50,996 | 540,184 |
| Elk— | | | | | | | | | | | | | |
| Daily average | 2,015 | 2,004 | 1,975 | 1,963 | 1,032 | 1,163 | 1,451 | 1,417 | 1,403 | 1,036 | 1,414 | 1,411 | |
| Month | 62,465 | 58,116 | 61,225 | 58,890 | 31,992 | 34,890 | 44,981 | 43,927 | 42,090 | 32,116 | 42,420 | 43,741 | 556,853 |
| Wilson— | | | | | | | | | | | | | |
| Daily average | 150 | 146 | 146 | 142 | 129 | 130 | 131 | 129 | 129 | 131 | 166 | 147 | |
| Month | 4,650 | 4,234 | 4,526 | 4,260 | 3,999 | 3,900 | 4,061 | 3,999 | 3,870 | 4,061 | 4,980 | 4,557 | 51,097 |
| Montgomery— | | | | | | | | | | | | | |
| Daily average | 1,179 | 1,174 | 1,182 | 1,167 | 1,274 | 1,263 | 1,244 | 1,144 | 1,137 | 1,072 | 1,033 | 1,039 | |
| Month | 36,549 | 34,046 | 36,642 | 35,010 | 39,494 | 37,890 | 38,564 | 35,464 | 34,110 | 33,232 | 30,990 | 32,209 | 424,200 |
| Edwards— | | | | | | | | | | | | | |
| Daily average | 30 | 34 | 39 | 37 | 41 | 39 | 41 | 35 | 38 | 35 | 32 | 31 | |
| Month | 930 | 986 | 1,209 | 1,110 | 1,271 | 1,170 | 1,271 | 1,178 | 1,140 | 1,085 | 960 | 961 | 13,271 |
| Ellis— | | | | | | | | | | | | | |
| Daily average | 859 | 819 | 878 | 896 | 837 | 813 | 743 | 813 | 819 | 761 | 766 | 762 | |
| Month | 26,629 | 23,751 | 27,218 | 26,880 | 25,947 | 24,390 | 23,033 | 25,203 | 24,570 | 23,591 | 22,980 | 23,625 | 297,814 |
| Barton— | | | | | | | | | | | | | |
| Daily average | 185 | 188 | 206 | 185 | 166 | 67 | 70 | 68 | 69 | 67 | 67 | 69 | |
| Month | 5,735 | 5,452 | 6,386 | 5,550 | 5,146 | 2,004 | 2,170 | 2,108 | 2,070 | 2,077 | 2,010 | 2,139 | 42,847 |
| Kingman— | | | | | | | | | | | | | |
| Daily average | 252 | 244 | 235 | 236 | 286 | 199 | 19 | 97 | 39 | 35 | 13 | 14 | |
| Month | 7,812 | 7,076 | 7,285 | 7,080 | 8,866 | 5,970 | 589 | 3,007 | 1,170 | 1,085 | 390 | 434 | 50,764 |
| Stafford— | | | | | | | | | | | | | |
| Daily average | ..... | ..... | 57 | 171 | 385 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| Month | ..... | ..... | 1,767 | 5,130 | 11,935 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 18,832 |
| Allen— | | | | | | | | | | | | | |
| Daily average | 466 | 469 | 464 | 460 | 410 | 421 | 444 | 437 | 291 | 427 | 527 | 483 | 161,601 |
| Month | 14,446 | 13,601 | 14,384 | 13,800 | 12,710 | 12,630 | 13,764 | 13,547 | 8,730 | 13,237 | 15,810 | 14,943 | |
| Neosho— | | | | | | | | | | | | | |
| Daily average | 480 | 477 | 480 | 469 | 468 | 461 | 475 | 463 | 476 | 482 | 483 | 471 | |
| Month | 14,880 | 13,833 | 14,880 | 14,070 | 14,508 | 13,830 | 14,725 | 14,353 | 14,280 | 14,942 | 14,490 | 14,601 | 173,392 |
| Lyon— | | | | | | | | | | | | | |
| Daily average | 322 | 309 | 336 | 331 | 324 | 322 | 317 | 292 | 303 | 285 | 284 | 290 | |
| Month | 9,982 | 8,961 | 10,416 | 9,930 | 10,044 | 9,660 | 9,827 | 9,052 | 9,090 | 8,835 | 8,520 | 8,990 | 113,307 |
| Miami— | | | | | | | | | | | | | |
| Daily average | 1,236 | 1,143 | 1,247 | 1,195 | 1,179 | 1,180 | 1,187 | 1,173 | 1,182 | 1,183 | 1,191 | 1,088 | |
| Month | 38,316 | 33,147 | 38,657 | 35,850 | 36,549 | 35,400 | 36,797 | 36,363 | 35,460 | 36,673 | 35,730 | 33,728 | 432,670 |
| Franklin— | | | | | | | | | | | | | |
| Daily average | 268 | 264 | 267 | 263 | 286 | 279 | 284 | 277 | 276 | 276 | 279 | 262 | |
| Month | 8,308 | 7,656 | 8,277 | 7,890 | 8,866 | 8,370 | 8,804 | 8,587 | 8,280 | 8,556 | 8,370 | 8,122 | 100,086 |
| Douglass— | | | | | | | | | | | | | |
| Daily average | 15 | 15 | 15 | 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| Month | 465 | 435 | 465 | 420 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,785 |
| Bourbon— | | | | | | | | | | | | | |
| Daily average | 26 | 25 | 27 | 26 | 29 | 27 | 35 | 33 | 36 | 35 | 33 | 29 | |
| Month | 806 | 725 | 837 | 780 | 899 | 810 | 1,085 | 1,023 | 1,080 | 1,085 | 990 | 899 | 11,019 |
| Linn— | | | | | | | | | | | | | |
| Daily average | 152 | 150 | 150 | 147 | 456 | 169 | 145 | 142 | 133 | 103 | 102 | 109 | |
| Month | 4,712 | 4,350 | 4,650 | 4,410 | 14,136 | 5,070 | 4,495 | 4,402 | 3,990 | 3,193 | 3,060 | 3,379 | 59,847 |
| Anderson— | | | | | | | | | | | | | |
| Daily average | 1,070 | 1,073 | 1,078 | 1,069 | 284 | 1,109 | 903 | 912 | 938 | 907 | 831 | 842 | |
| Month | 33,170 | 31,117 | 33,418 | 32,070 | 8,804 | 33,270 | 27,993 | 28,272 | 28,140 | 28,117 | 24,930 | 26,102 | 335,403 |
| Ellsworth— | | | | | | | | | | | | | |
| Daily average | 1,443 | 1,007 | 1,154 | 1,055 | 1,566 | 1,685 | 2,100 | 1,999 | 1,791 | 999 | 1,763 | 2,496 | |
| Month | 44,733 | 29,203 | 35,774 | 31,650 | 48,546 | 50,545 | 65,100 | 61,969 | 53,730 | 30,969 | 52,890 | 77,376 | 582,485 |
| Woodson— | | | | | | | | | | | | | |
| Daily average | 114 | 116 | 110 | 113 | 38 | 99 | 39 | 38 | 41 | 38 | 39 | 44 | |
| Month | 3,534 | 3,364 | 3,410 | 3,390 | 1,178 | 2,970 | 1,209 | 1,178 | 1,230 | 1,178 | 1,170 | 1,364 | 25,175 |
| Daily average | 102,277 | 97,891 | 98,159 | 99,136 | 98,030 | 94,573 | 93,768 | 98,289 | 99,524 | 93,306 | 94,726 | 89,609 | 96,555 |
| Total 1932 | 3,170,587 | 2,838,839 | 3,042,929 | 2,974,080 | 3,038,930 | 2,837,179 | 2,906,808 | 3,046,959 | 2,970,750 | 2,892,486 | 2,841,780 | 2,777,879 | 35,339,206 |
| Total 1931 | 3,432,475 | 3,341,016 | 3,498,593 | 3,281,880 | 3,341,366 | 3,175,440 | 3,089,832 | 3,141,323 | 3,147,030 | 3,177,066 | 3,131,670 | 3,198,642 | 38,956,338 |
| Total 1930 | 3,273,197 | 2,965,704 | 3,504,395 | 3,734,253 | 3,978,385 | 3,765,060 | 3,541,409 | 3,491,530 | 3,405,510 | 3,571,913 | 3,459,330 | 3,432,861 | 42,123,347 |
| Total 1929 | 2,861,641 | 2,557,968 | 2,951,076 | 3,113,740 | 3,665,099 | 3,636,150 | 3,867,157 | 3,816,555 | 3,780,690 | 3,429,468 | 3,430,560 | 3,549,066 | 40,653,170 |
| Total 1928 | 3,319,325 | 3,079,887 | 3,379,031 | 3,413,360 | 3,367,809 | 3,202,050 | 3,171,548 | 3,147,058 | 3,047,250 | 3,058,460 | 2,977,800 | 2,988,400 | 38,150,878 |
| Total 1927 | 3,769,879 | 3,352,076 | 3,675,143 | 3,516,930 | 3,704,314 | 3,437,580 | 3,454,082 | 3,442,240 | 3,341,340 | 3,509,169 | 3,313,650 | 3,427,174 | 41,943,577 |
| Total 1926 | 3,250,536 | 2,877,812 | 3,334,887 | 3,330,120 | 3,516,640 | 3,366,450 | 3,582,267 | 3,681,436 | 3,450,060 | 3,714,637 | 3,593,490 | 3,654,156 | 41,346,511 |

# New Mexico Is Rocky Mountain's Busiest Area; Montana Reports Important Discoveries

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

New Mexico was the only state in the Rocky Mountain area which showed an increase in drilling operations and new production in 1932 as compared with 1931. This was due to the renewal of drilling in the Hobbs Pool. There were 63 wells completed in the State, an increase of 5 over 1931, and new production amountel to 171,518 bbls., an increase of 70,893 bbls. There were 15 dry holes, a decrease of 6, and 4 gas wells, a decrease of 7.

The water problem in Hobbs continued to affect only the southwestern edge of the pool where encroachment gradually is taking place. Water has not appeared in wells in other parts of the field. Experiments indicated that in some of the wells on the southwestern edge the water was coming from the top of the lime and that packers placed above the pay were helpful in increasing production. This did not apply, however, to all of them. Twenty-three wells in that district are showing some water in varying amounts, in some instances as low as 3 per cent and less.

### Results of Test Work

The most important completion in Eddy County was the Grayburg Oil Co.'s No. 3 Burch, C SW NW Section 19-17-30, which proved up some territory to the north of the Jackson Pool, the best well completed in Eddy County in several years. It topped the pay at 2,923 feet and was completed at 3,101 feet for 520 bbls. the first 24 hours.

In San Juan County the Continental Oil Co. completed a second test to the Pennsylvanian formation on the Rattlesnake Dome in its No. 24, SW NW SW Section 1-29-19, one-fourth of a mile southeast of No. 17, discovery well, which was completed in June, 1929, at 6,790 feet. No. 24 was drilled to 7,370 feet and plugged back to 6,620 feet, where it averaged 600 bbls. per day from the pay found in No. 17. The last named, after being on production for three years and making 360,000 bbls. of oil, with water, ceased to flow and considerable work was done on it without restoring production.

R. C. Oswell developed an extension of a small pool 4 miles south of Aztec in his No. 3, SE NE NE Section 33-30-11w, which flowed 30 bbls. per day of 60 gravity oil from sand at 1,422-42 feet. The oil comes from a second sand in the Farmington series and indicates the opening of a small pool. The oil is sold to a local skimming plant and the product is marketed in that territory.

The refinery erected in 1926 at Dayton, Eddy County, by the Sullivan Refineries, Inc., was sold at a foreclosure sale and dismantled. Malco Refineries, Inc., constructed a refinery and is taking crude from the Artesia district, for which it is the only common purchaser posting field prices.

**NEW MEXICO**
**Summary of Wells Completed in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Chaves | 2 | 0 | 2 | 0 |
| Curry | 1 | 0 | 1 | 0 |
| Eddy | 15 | 740 | 4 | 3 |
| Lea | 31 | 169,685 | 1 | 0 |
| McKinley | 2 | 0 | 2 | 0 |
| Otero | 1 | 0 | 1 | 0 |
| Rio Arriba | 1 | 0 | 1 | 0 |
| San Juan | 6 | 1,093 | 0 | 0 |
| San Miguel | 2 | 0 | 2 | 0 |
| Torrance | 1 | 0 | 0 | 1 |
| Valencia | 1 | 0 | 1 | 0 |
| Total, 1932 | 63 | 171,518 | 15 | 4 |
| Total, 1931 | 58 | 80,625 | 21 | 11 |
| Difference | 5 | 90,893 | 6 | 7 |

**Completion by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 7 | 3,585 | 3 | 1 |
| February | 3 | 14,761 | 1 | 1 |
| March | 4 | 25,206 | 0 | 0 |
| April | 2 | 6,294 | 0 | 0 |
| May | 4 | 1,530 | 1 | 0 |
| June | 3 | 6,454 | 1 | 0 |
| July | 5 | 6,348 | 0 | 1 |
| August | 4 | 3,096 | 1 | 0 |
| September | 11 | 22,809 | 4 | 0 |
| October | 4 | 394 | 2 | 0 |
| November | 7 | 36,545 | 0 | 1 |
| December | 9 | 38,916 | 2 | 0 |
| Total | 63 | 171,518 | 15 | 4 |

### COLORADO

The most interesting discovery of the year was made in northeastern Colorado, an area of about 45,000 square miles which has attracted attention for several years. The test was drilled by the Ramsey Petroleum Co. in its No. 1 St. Anthony, SW NE SE Section 15-7n-59, in Weld County, 13 miles northeast of the Greasewood Pool and near the towns of Buckingham and New Raymer.

A string of 5½-inch was run and landed on bottom in the Dakota at 6,702 feet. This string was perforated at the bottom and opposite the Muddy gas sand. The swab was run and at 3,400 feet it was blown out of the hole and the well began to flow. The first 24 hours it made 110 bbls. of water and 20 bbls. of oil. The oil increased to an average of 60 bbls. per day and the water decreased to 80 bbls. Analysis indicated that this was water used in drilling and not Dakota water. Cable tools then were substituted for the rotary and drilling went ahead slowly. The water gradually increased with depth and the oil decreased until at 6,791 feet, 34 feet below the top, it was flowing better than 1,000 bbls. of water per day. Operations were then suspended until after the holidays. No announcement has yet been made as to future plans, but it is expected that the well will be plugged back and completed as a gasser. The opinion most frequently expressed is that the well is on structure, but near the edge, and that the discovery of oil in the Dakota is so encouraging that additional drilling should take place to develop the structural possibilities.

Manning & Terry drilled a test in their No. 1 Niles, C SE NE Section 13-6n-61, in northeastern Colorado. It had only a show in the Muddy and had 4,400 feet of water from the Dakota at 6,709-21 feet. This narrowed the Greasewood Dome down to the limits of a minor pool. However, the Ohio Oil Co. went half a mile northeast of the Manning & Terry well in its No. 1 Butters, C SW SW Section 7-6n-60, and completed a 30-bbl. well in the Muddy at 6,685-89 feet after plugging back from the Dakota, which contained water, at 6,759 feet. In the meantime the Prairie Oil & Gas Co. tested the Crow Creek structure, 10 miles to the northwest, in its No. 1 O'Toole, C SE NE Section 33-7n-62, and the Jackson Lake district, 6 miles to the southeast, in its No. 1 Mortier, C NE NW Section 2-5n-60, both of which were abandoned.

### New Gas Fields

A new gas field was discovered on the Craig Dome, in Moffat County, 3 miles from the town of Craig, when the Ohio Oil Co. completed in March its No. 1 Bogenschults, C SE SE Section 9-6n-91. It cut sands in the Mesa Verde formation at 2,732-46, 2,781-2,802 and 2,807 feet. The last sand was barely scratched. It was completed and gauged 11,000,000 feet open flow with a pressure of 1,240 pounds. This was the only well drilled. The company, through the Rocky Mountain Gas Co., a subsidiary, constructed a line to Craig, installed a distributing system, and is now supplying gas for domestic and industrial purposes.

Another gas field was opened up on the Piceance Creek structure in Rio Blanco County, in two wells drilled by the Magnolia Petroleum Co. A test drilled in 1931 was completed as a small gas well. In 1932 the company completed its No. 1 Maddock, C NW SE Section 9-2s-96, in sand in the Tertiary formation at 2,914-56 feet. It gauged 8,250,000 feet with a pressure of 790 pounds. It is located half a mile to the east of the discovery well. It then went a mile to the southeast and completed its No. 1 Titley, NW cor. SW Section 15-2s-96, at 2,988 feet for 4,000,000 feet per day. This structure is completely unitized and the three wells indicated that at least 15,000 acres will be productive with encouraging prospects for oil on the flanks.

### Oil in Pennsylvanian

An oil discovery in the Pennsylvanian formation was made on the Rangely Dome in Rio Blanco County by the California Co. in its No. 1 California-Raven, NW SE Section 30-2n-102, but the well has not been completed and its production has not been disclosed. It is known that at 5,781 feet it began showing oil in thin sand streaks and that more than 300 feet of saturated formations of this character have been cut. It is still drilling at 6,714 feet.

The Raddatz Corp. found the northwestern edge of the Berthoud Field, a small pool in Larimer County, in its No. 2 Fagin, NE SE NE Section 17-4n-69. It was abandoned after finding the Muddy, the producing horizon, dry at 3,790-3,805 feet. The limits of the pool on the east and southeast have not yet been disclosed.

A small gas discovery was made on the Fish Creek Dome in Routt County in the Mid-Colorado Petroleum Co.'s No. 1 Omholt, NE cor. SE Section 29-4n-87. At 1,917 feet it was making 1,500 feet of

## New Mexico

**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HOGBACK: | | | | | | | | | | | | | |
| Daily average | 314 | 191 | 254 | 405 | 464 | 428 | 377 | 426 | 419 | 411 | 399 | 345 | |
| Month | 9,734 | 5,539 | 7,874 | 12,150 | 12,524 | 12,840 | 11,687 | 13,216 | 12,570 | 12,741 | 11,970 | 10,695 | 133,840 |
| RATTLESNAKE: | | | | | | | | | | | | | |
| Daily average | 767 | 721 | 719 | 662 | 366 | 638 | 613 | 691 | 678 | 823 | 675 | 221 | |
| Month | 23,777 | 20,909 | 22,289 | 19,890 | 11,346 | 19,140 | 19,003 | 21,421 | 20,340 | 25,513 | 20,250 | 6,851 | 230,729 |
| TABLE MESA: | | | | | | | | | | | | | |
| Daily average | 68 | 75 | 69 | 72 | 77 | 76 | 154 | 80 | 76 | 99 | 65 | 74 | |
| Month | 2,108 | 2,175 | 2,139 | 2,160 | 2,387 | 2,280 | 4,774 | 2,480 | 2,280 | 3,069 | 1,950 | 2,294 | 30,096 |
| ARTESIA: | | | | | | | | | | | | | |
| Daily average | 494 | 457 | 448 | 504 | 515 | 543 | 567 | 519 | 476 | 506 | 463 | 465 | |
| Month | 15,314 | 13,253 | 13,888 | 15,120 | 15,965 | 16,290 | 17,577 | 16,089 | 14,280 | 15,686 | 13,890 | 14,415 | 181,767 |
| HOBBS: | | | | | | | | | | | | | |
| Daily average | 31,417 | 30,833 | 30,611 | 30,475 | 30,396 | 29,684 | 29,513 | 25,127 | 25,004 | 25,076 | 24,992 | 21,271 | |
| Month | 973,927 | 894,157 | 948,841 | 914,250 | 942,276 | 890,520 | 914,903 | 778,937 | 750,120 | 777,356 | 749,760 | 659,401 | 10,191,448 |
| JAL: | | | | | | | | | | | | | |
| Daily average | 866 | 893 | 905 | 901 | 840 | 872 | 870 | 947 | 998 | 989 | 978 | 1,019 | |
| Month | 26,846 | 25,897 | 28,055 | 27,030 | 26,040 | 26,160 | 26,970 | 29,357 | 29,940 | 30,659 | 29,340 | 31,589 | 337,883 |
| EUNICE: | | | | | | | | | | | | | |
| Daily average | 506 | 536 | 625 | 503 | 563 | 499 | 511 | 521 | 519 | 520 | 518 | 507 | |
| Month | 15,696 | 15,544 | 19,375 | 15,090 | 17,453 | 14,970 | 15,841 | 16,151 | 15,570 | 16,120 | 15,540 | 15,717 | 193,057 |
| MALJAMAR: | | | | | | | | | | | | | |
| Daily average | 580 | 670 | 736 | 1,038 | 720 | 1,136 | 873 | 835 | 684 | 679 | 682 | 668 | |
| Month | 17,980 | 19,430 | 22,816 | 31,140 | 22,320 | 34,080 | 27,063 | 25,885 | 20,520 | 21,049 | 20,460 | 20,708 | 283,451 |
| LEA CITY AND T. & P.: | | | | | | | | | | | | | |
| Daily average | 2,174 | 2,062 | 2,067 | 1,983 | 1,902 | 1,758 | 1,807 | 2,169 | 2,306 | 2,350 | 2,075 | 2,336 | |
| Month | 67,394 | 59,798 | 64,077 | 59,490 | 58,962 | 52,740 | 56,017 | 67,239 | 69,180 | 72,850 | 62,250 | 72,416 | 762,413 |
| Daily average | 37,136 | 36,438 | 36,334 | 36,544 | 35,782 | 35,634 | 35,285 | 31,325 | 31,160 | 31,452 | 30,847 | 26,906 | 33,739 |
| Total 1932 | 1,152,766 | 1,056,702 | 1,126,354 | 1,096,320 | 1,109,273 | 1,069,020 | 1,093,835 | 971,075 | 934,800 | 975,043 | 925,410 | 834,086 | 12,344,684 |
| Total 1931 | 1,233,204 | 1,133,220 | 1,252,989 | 1,199,730 | 1,385,359 | 1,328,070 | 1,305,503 | 1,305,534 | 1,276,290 | 1,330,613 | 1,295,730 | 1,324,041 | 15,369,383 |
| Total 1930 | 315,549 | 238,532 | 337,523 | 374,880 | 558,589 | 686,040 | 1,368,061 | 1,311,052 | 1,344,510 | 1,343,509 | 1,312,510 | 1,286,655 | 10,377,415 |
| Total 1929 | 97,668 | 83,284 | 89,621 | 98,640 | 96,751 | 88,762 | 126,116 | 145,421 | 177,840 | 245,675 | 279,090 | 285,293 | 1,803,261 |
| Total 1928 | 74,865 | 59,981 | 69,347 | 68,160 | 73,470 | 58,860 | 69,471 | 89,156 | 94,830 | 97,309 | 98,100 | 120,342 | 973,881 |
| Total 1927 | 136,679 | 138,469 | 148,738 | 142,140 | 113,530 | 102,120 | 99,200 | 76,911 | 73,500 | 58,652 | 71,910 | 63,364 | 1,214,284 |

# Vogt Drop Forged Steel Valves *are best for* Butt Welding

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..... Drop forging from clean ductile steel results in a fine grained, tough structure which is free from inherent defects and welds easily ..... There is little danger of cracking subsequent to welding since the structure is normal ..... Welding *similar* metals is less troublesome and remedies the ills of *contact corrosion.*

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gas in an uncased hole from the Frontier formation. The objective is the Sundance.

**COLORADO**

**Summary of Wells Completed in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Fremont | 4 | 0 | 4 | 0 |
| Larimer | 2 | 30 | 1 | 0 |
| Las Animas | 1 | 0 | 0 | 1 |
| Moffat | 1 | 0 | 0 | 1 |
| Montrose | 1 | 0 | 1 | 0 |
| Morgan | 4 | 30 | 3 | 0 |
| Rio Blanco | 1 | 0 | 0 | 1 |
| Routt | 3 | 30 | 2 | 0 |
| Weld | 6 | 27 | 5 | 0 |
| Washington | 1 | 0 | 1 | 0 |
| Yuma | 1 | 0 | 1 | 0 |
| Total, 1932 | 25 | 117 | 18 | 3 |
| Total, 1931 | 27 | 2,766 | 12 | 5 |
| Difference | 2 | 2,649 | 6 | 2 |

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 5 | 0 | 5 | 0 |
| February | 3 | 20 | 2 | 0 |
| March | 2 | 27 | 1 | 0 |
| April | 1 | 0 | 0 | 1 |
| May | 2 | 0 | 2 | 0 |
| June | 5 | 0 | 4 | 1 |
| July | 1 | 0 | 1 | 0 |
| August | 0 | 0 | 0 | 0 |
| September | 1 | 30 | 0 | 0 |
| October | 2 | 0 | 1 | 1 |
| November | 0 | 0 | 0 | 0 |
| December | 3 | 30 | 2 | 0 |
| Total | 25 | 117 | 18 | 3 |

## WYOMING

Wildcatting in Wyoming in 1932, which was conducted on a very limited scale, failed to open any new oil or gas pools of importance.

The Frannie Dome in Park County was extended one-fourth of a mile to the west in March in the Midwest Refining Co.'s No. 4 Rosenberg, NE NW NE Section 26-58-98, which made 610 bbls. on the pump the first 24 hours. This compares with 150 to 300 bbls. per day for wells on top of the structure and indicates that the flank wells will be the largest producers. This test is 530 feet down structure and proved the dome to be at least half full of oil. It topped the red beds at 2,666 feet, the Embar at 3,225 feet, the pay at 3,275 feet and was completed at 3,295 feet. At the end of the year the Continental Oil Co. was drilling another test still farther out on the flanks.

Last spring Sidney H. Keoughan and associates acquired the holdings of the Midwest Refining Co. and associated interests on the Midway and North Geary Domes in Natrona County, between the Salt Creek and Big Muddy Fields.

Last September the Mutual Oil Syndicate, S. H. Keoughan and associates, took over the operation of the Dutton Creek Field in Carbon County from the Midwest Refining Co. and began development of a gas supply in the Shannon sand at 1,800 feet with the object of supplying natural gas to the city of Laramie. The Mutual syndicate drilled three gas wells to the Shannon sand and the Ohio Oil Co. completed one well at the southern end. These wells proved a gas area 2 miles long in a north-south trend and built up a supply of 5,000,000 feet per day. The Illinois Pipe Line Co., subsidiary of the Ohio company, has a 36-mile 6-inch oil line from the Rock Creek Field to Laramie which has not been in use since the Standard of Indiana refinery at that place ceased operations, and a 4¾-mile 3-inch line from Dutton Creek to a connection with this line. The Laramie Gas Co., distributor of manufactured gas in Laramie, obtained a natural gas franchise. A deal is now pending for the sale, transportation and marketing of the Dutton Creek gas. The plans provide for the converting of the oil carrier into a natural gas line. Construction, including conversion of the Laramie system, will cost around $750,000. The Mutual syndicate will develop the gas area as needed and plans for 1933 include the drilling of a deep well for oil.

Developments during the year outside of drilling operations included the following:

The refineries of the Standard Oil Co. (Indiana) at Casper were electrified during the year following the construction of a 39-mile high-tension power line from Salt Creek. The power plant had an excess of power above pumping requirements in the field and this was utilized to replace steam power with electric power for all prime movers. The Stearns-Rogers Manufacturing Co. of Denver had the contract. The cost was approximately $150,000.

During the year the Standard Oil Co. (Indiana) refinery at Greybull operated at capacity on black oils from Hamilton Dome, the Byron-Garland Field and Grass Creek. The company in the preceding year completed a 2,500-bbl. unit especially designed to handle that grade of crude. Substantial orders for road oil and lubricants are being filled from this plant.

At the end of the year work was nearing completion on a 6,500-bbl. cracking unit at the Standard refinery at Casper. It was designed at the Whiting, Ind., plant of the company and was developed with a view to handling the black oils which are coming into their own in Wyoming.

### Midwest Dissolved

The Midwest Refining Co., a pioneer developer of the Rocky Mountain area, and which operated in all of the states, was dissolved during the year. Its producing properties, pipe lines, etc., were taken over by the Stanolind Oil & Gas Co., a subsidiary of the Standard Oil Co. (Indiana), and the parent company took over refineries and other departments. A general realignment of operating staffs followed. The Midwest turned its Midway and North Geary holdings and its Dutton Creek properties over to the Mutual Oil Syndicate. It transferred its Big Muddy operations in Wyoming and Cat Creek and Pondera operations in Montana to the Continental Oil Co. and received in return Continental holdings in the Elk Basin Field. Disposition to California interests was made of its Hospah holdings in McKinley County, New Mexico, and some of its undeveloped leases were turned back to the owners, or transferred to other companies. The Standard of Indiana controlled all but a fraction of 1 per cent of the Midwest stock.

**WYOMING**

**Summary of Wells Completed in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Carbon | 6 | 0 | 2 | 4 |
| Converse | 2 | 30 | 1 | 0 |
| Fremont | 3 | 43 | 1 | 0 |
| Johnson | 1 | 0 | 1 | 0 |
| Natrona | 4 | 0 | 3 | 1 |
| Niobrara | 3 | 200 | 1 | 1 |
| Park | 4 | 610 | 3 | 0 |
| Sublet | 2 | 65 | 0 | 0 |
| Sweetwater | 1 | 0 | 1 | 0 |
| Washakie | 2 | 25 | 1 | 0 |
| Weston | 33 | 2,429 | 10 | 0 |
| Total, 1932 | 61 | 3,392 | 24 | 6 |
| Total, 1931 | 71 | 10,759 | 22 | 9 |
| Difference | 10 | 7,367 | 2 | 3 |

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 2 | 0 | 2 | 0 |
| February | 4 | 5 | 3 | 0 |
| March | 2 | 910 | 0 | 0 |
| April | 3 | 128 | 0 | 0 |
| May | 2 | 203 | 0 | 0 |
| June | 1 | 300 | 0 | 0 |
| July | 11 | 290 | 6 | 1 |
| August | 5 | 630 | 1 | 1 |
| September | 9 | 245 | 4 | 0 |
| October | 3 | 250 | 1 | 0 |
| November | 8 | 268 | 5 | 1 |
| December | 11 | 163 | 2 | 3 |
| Total | 61 | 3,392 | 24 | 6 |

## MONTANA

The principal development in Montana in 1932 was in the Cut Bank area in

## Colorado

**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MOFFAT: | | | | | | | | | | | | | |
| Daily average | 755 | 642 | 752 | 659 | 704 | 691 | 586 | 611 | 623 | 617 | 541 | 597 | |
| Month | 23,405 | 18,618 | 23,498 | 19,770 | 21,824 | 20,730 | 18,166 | 18,941 | 18,690 | 19,127 | 16,230 | 18,507 | 237,506 |
| FORT COLLINS: | | | | | | | | | | | | | |
| Daily average | 791 | 896 | 979 | 801 | 812 | 776 | 830 | 605 | 830 | 696 | 755 | 679 | |
| Month | 24,521 | 23,884 | 30,349 | 24,030 | 25,173 | 23,280 | 25,730 | 18,756 | 24,900 | 21,576 | 22,650 | 21,049 | 290,896 |
| FLORENCE: | | | | | | | | | | | | | |
| Daily average | 310 | 407 | 302 | 380 | 341 | 260 | 325 | 308 | 301 | 292 | 280 | 208 | |
| Month | 9,610 | 11,803 | 9,362 | 11,400 | 10,571 | 7,800 | 10,385 | 9,548 | 9,030 | 9,052 | 8,400 | 6,448 | 113,409 |
| ILES: | | | | | | | | | | | | | |
| Daily average | 754 | 745 | 781 | 811 | 702 | 603 | 581 | 359 | 591 | 562 | 625 | 579 | |
| Month | 23,374 | 21,605 | 24,211 | 24,330 | 21,762 | 18,090 | 18,011 | 11,129 | 17,730 | 17,453 | 18,750 | 17,949 | 234,394 |
| TOW CREEK: | | | | | | | | | | | | | |
| Daily average | 304 | 287 | 320 | 281 | 277 | 267 | 257 | 267 | 282 | 256 | 267 | 266 | |
| Month | 9,424 | 8,323 | 9,920 | 8,430 | 8,587 | 8,010 | 7,947 | 8,277 | 8,460 | 7,936 | 8,010 | 8,246 | 100,970 |
| WALDREN: | | | | | | | | | | | | | |
| Rangely— | | | | | | | | | | | | | |
| Daily average | ..... | 92 | 93 | 87 | 86 | 91 | 82 | 76 | 52 | 96 | 102 | 96 | |
| Month | ..... | 2,664 | 2,883 | 2,610 | 2,666 | 2,730 | 2,542 | 2,418 | 1,560 | 2,976 | 3,060 | 2,976 | 29,085 |
| ORCHARD: | | | | | | | | | | | | | |
| Daily average | 550 | 419 | 374 | 367 | 318 | 296 | 258 | 223 | 207 | 183 | 170 | 173 | |
| Month | 17,050 | 12,151 | 11,594 | 11,010 | 9,858 | 8,880 | 7,998 | 6,913 | 6,210 | 5,673 | 5,100 | 5,363 | 107,800 |
| Daily average | 3,464 | 3,588 | 3,607 | 3,385 | 3,240 | 2,984 | 2,902 | 2,451 | 2,886 | 2,703 | 2,740 | 2,598 | 3,017 |
| Total 1932 | 107,384 | 104,052 | 111,817 | 101,580 | 100,440 | 89,520 | 90,179 | 76,981 | 86,580 | 83,793 | 82,200 | 80,538 | 1,114,064 |
| Total 1931 | 121,471 | 119,336 | 132,295 | 122,910 | 129,270 | 132,960 | 137,286 | 106,578 | 127,320 | 128,043 | 115,950 | 119,443 | 1,492,862 |
| Total 1930 | 151,187 | 146,860 | 144,274 | 133,530 | 137,175 | 136,950 | 139,262 | 131,658 | 125,430 | 131,192 | 122,910 | 124,031 | 1,623,639 |
| Total 1929 | 215,016 | 182,280 | 213,126 | 197,130 | 223,727 | 224,220 | 213,835 | 212,009 | 185,430 | 167,958 | 162,830 | 164,984 | 2,361,595 |
| Total 1928 | 234,625 | 232,625 | 259,562 | 203,610 | 204,282 | 218,940 | 258,805 | 234,608 | 208,830 | 262,126 | 220,350 | 211,599 | 2,744,184 |
| Total 1927 | 215,016 | 223,356 | 242,947 | 274,620 | 239,165 | 217,200 | 232,926 | 226,021 | 204,150 | 220,596 | 220,050 | 205,623 | 2,722,670 |

## Montana

**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BANNATYNE: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | 65 | ..... | ..... | 48 | 49 | 50 | 49 | 51 | 49 | |
| Month | ..... | ..... | ..... | 1,950 | ..... | ..... | 1,488 | 1,519 | 1,500 | 1,519 | 1,530 | 1,519 | 11,025 |
| CAT CREEK: | | | | | | | | | | | | | |
| Daily average | 904 | 892 | 878 | 872 | 871 | 857 | 854 | 820 | 819 | 792 | 782 | 816 | |
| Month | 28,024 | 25,868 | 27,218 | 26,160 | 27,001 | 25,710 | 26,474 | 25,699 | 24,570 | 24,552 | 23,460 | 25,296 | 310,032 |
| KEVIN-SUNBURST: | | | | | | | | | | | | | |
| Daily average | 2,881 | 2,839 | 2,694 | 3,784 | 3,506 | 3,345 | 4,015 | 3,501 | 3,479 | 3,216 | 2,733 | 3,162 | |
| Month | 89,311 | 82,331 | 83,514 | 113,520 | 108,686 | 100,350 | 124,465 | 108,531 | 104,370 | 99,696 | 81,990 | 98,022 | 1,194,786 |
| PONDERA: | | | | | | | | | | | | | |
| Daily average | 1,223 | 1,052 | 1,568 | 1,476 | 1,268 | 1,444 | 1,136 | 1,077 | 1,116 | 1,050 | 1,049 | 713 | |
| Month | 37,913 | 30,508 | 48,608 | 44,280 | 42,408 | 43,320 | 35,216 | 33,387 | 33,480 | 32,550 | 31,470 | 22,103 | 435,243 |
| LAKE BASIN: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | 56 | 56 | 60 | 62 | 35 | 31 | 26 | 46 | 50 | 51 | |
| Month | ..... | ..... | 1,736 | 1,640 | 1,860 | 1,860 | 1,085 | 961 | 780 | 1,426 | 1,500 | 1,581 | 14,469 |
| BUCKLEY-BORDER: | | | | | | | | | | | | | |
| Daily average | 591 | 551 | 509 | 440 | 630 | 639 | 211 | 148 | 302 | 423 | 264 | 412 | |
| Month | 18,321 | 15,979 | 15,779 | 13,200 | 19,220 | 19,170 | 6,541 | 4,588 | 9,060 | 13,113 | 7,620 | 12,772 | 155,363 |
| DRY CREEK: | | | | | | | | | | | | | |
| Daily average | ..... | 403 | 399 | 768 | 1,112 | 655 | 745 | 780 | 639 | 496 | 122 | 159 | |
| Month | ..... | 11,687 | 12,369 | 23,040 | 34,472 | 19,650 | 23,095 | 24,180 | 19,170 | 15,376 | 3,660 | 4,929 | 191,628 |
| CUT BANK: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 110 | 139 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3,300 | 4,309 | 7,609 |
| Daily average | 5,599 | 5,737 | 6,104 | 7,461 | 7,537 | 7,002 | 7,044 | 6,415 | 6,431 | 6,072 | 5,151 | 5,501 | 6,353 |
| Total 1932 | 173,569 | 166,373 | 189,224 | 223,830 | 233,647 | 210,060 | 218,364 | 198,865 | 192,930 | 188,232 | 154,530 | 170,531 | 2,326,155 |
| Total 1931 | 243,133 | 249,300 | 256,285 | 249,840 | 254,138 | 248,450 | 247,287 | 227,974 | 236,100 | 226,734 | 175,260 | 232,500 | 2,847,201 |
| Total 1930 | 253,456 | 233,408 | 267,561 | 298,410 | 304,172 | 289,350 | 304,202 | 301,165 | 256,380 | 234,360 | 229,050 | 233,293 | 3,203,808 |
| Total 1929 | 361,290 | 357,656 | 393,973 | 398,880 | 350,238 | 347,610 | 347,445 | 356,190 | 332,940 | 325,544 | 320,490 | 324,849 | 4,327,067 |
| Total 1928 | 363,570 | 339,679 | 358,113 | 350,520 | 338,272 | 313,260 | 317,626 | 328,600 | 336,870 | 296,980 | 307,440 | 347,820 | 3,998,549 |
| Total 1927 | 426,498 | 399,868 | 452,600 | 417,000 | 434,155 | 462,330 | 456,847 | 497,364 | 413,280 | 428,947 | 379,560 | 403,434 | 5,171,883 |

Glacier County, where an oil pool was opened up to the southwest of the gas wells drilled in 1931 by Louis B. O'Neill for the Montana Power Co.

In June, 1932, R. C. Tarrant completed a producer in No. 1 Haglung, NW cor. SW Section 13-34-6w. It found the sand at 2,848-94 feet and averaged 80 bbls. per day on the pump. This started a drilling campaign which resulted in several completions extending a distance of 7 miles between the outpost producers in a northwest-southeast direction. The limits of the pool in neither direction were disclosed by these wells. The well farthest to the southeast was the Montana Power Co.'s No. 1 Simereo, C N half Section 5-33-5w. The sand was encountered at 2,749-54 feet and the well was completed at 2,765 feet for an initial production of 102 bbls. in 24 hours. The most northwesterly of the wells was R. C. Tarrant's No. 1 Reikhoff, SE SW NE Section 3-34-6w, in the Blackfeet Indian Reservation. It had 41 feet of saturated sand at 2,921-62 feet and swabbed around 100 bbls. per day initial. A gas well completed by the Montana Power Co. in its No. 1 Peoples, C SW NW Section 20-34-5w, and the Drumheller gasser in the SE NW Section 1-34-6w, serve to connect the oil development with the gas field to the northeast. In between the outpost producers R. C. Tarrant completed his No. 1 Yunck, C NW NW Section 12-34-6w, for 102 bbls. from sand at 2,777-2,800 feet. The Santa Rita Oil & Gas Co. (Louis B. O'Neil and associates) completed its No. 1 Yunck, NE NW NE Section 23-34-6w, in sand at 2,875-2,905 feet and flowed 145 bbls. in eight hours after running swab. The Santa Rita company also completed its No. 2 Yunck, NE cor. SE Section 24-34-6w, from sand topped at 2,811 feet with an initial production of 48 bbls. At the end of the year there were 12 active operations under way. The oil has a paraffin base and tests 37 to 38 degrees gravity. The production marketed so far has been moved from the field in trucks. The O'Neill interests, however, have plans under way for a pipe line from field to railhead near Cut Bank. A refinery analysis of the crude shows 35 per cent gasoline, 15 per cent kerosene, 29.5 per cent gas oil and 20.5 per cent fuel oil.

### Dry Creek Dome

Two wells were drilled on the Dry Creek Dome in Carbon County, north of the Wyoming line, which extended the productive area 1¼ miles to the east and 1 mile to the northwest. Both wells, however, encountered water trouble. Another well found production in a lower bench of the Lakota sand and another well tested all horizons down to the top of the red beds. Early in 1932 the Carbon Oil & Gas Co.'s No. 1 Armstrong, SW cor. NW Section 7-7s-22, 1¼ miles east of the nearest producer, came in with an initial production of 1,800 bbls. per day with 12,000,000 feet of gas with a rock pressure of 1,030 pounds. This production was in the Dakota at 5,601-5,710 feet. However, shortly afterwards it began showing bottom water and for some time efforts have been in progress to plug off the water and produce the upper part of the sand. It came back flowing as high as 160 bbls. per day, but additional work is to be done on it in the hopes of increasing the flow.

The extension a mile to the northwest was made in the Ohio Oil Co.'s No. 11 Bowman, C SE NE Section 4-7s-21. It found the Dakota at 5,665-79 feet and the Lakota at 5,928-94 feet. However, water made its appearance in the Lakota and at the end of the year plugging and testing was still in progress. It was estimated that the well will make 500 to 600 bbls. per day. The No. 1 Armstrong is to the south of an east-west fault across the structure and the No. 11 Bowman is to the north of this fault.

A deep test was drilled in the Ohio Oil Co.'s No. 1 Chapman, C SW SW Section 2-7s-21, which went into the top of the red beds at a total depth of 6,219 feet. It was the first well drilled into the Sundance, but yielded nothing of value and was plugged back to a sand in the Dakota series at 5,601-35 feet, which on a 24-hour gauge flowing through a Shafer bean made 886 bbls. Another important completion was the Ohio's No. 6 Montana Industrial, C NW NE Section 11-7s-21, which found production in the Pryor conglomerate in the Lakota formation at 5,404-88 feet. It gauged 422 bbls. the first 24 hours and increased to 1,290 bbls. on the sixth day. Several other wells were drilled on the structure, but these proved no extensions nor new horizons. The oil in this field tests 52 degrees gravity. The Ohio company renewed a contract with the Utah Oil Refining Co. for 400 bbls. per day. The Carbon Oil & Gas Co. contracted with the Yale Corp. of Montana for a maximum of 1,000 bbls. per day from its wells. Production from the field was held down to market requirements. The productive area is about 3 miles long and less than a mile wide.

The Ohio Oil Co. drilled a deep test on the Golden Dome, 3 miles east of the Dry Creek Field, in its No. 1 Kuchinski, NW SE NE Section 15-7s-22. It penetrated all horizons down to and including the Morrison at a total depth of 6,660 feet, but failed to open up commercial production.

### Miscellaneous Developments

The California Co. drilled two important wildcats in Montana during the year, both of which were abandoned. Its No. 1 Ross, NE SE NE Section 3-33-6e, on the Utopia Dome, in Liberty County, was abandoned in the Madison at 3,337 feet. It had water in a sand at 3,226-70 feet, and a dry sand at 3,208-18 feet. Its No. 1 Sullivan, NW NE NW Section 34-27-7w, in the Bynum-Pendroy district in Teton County, was abandoned at 3,654 feet. The company had a block of 40,000 acres around this test located on the western flank of the Sweetgrass Arch.

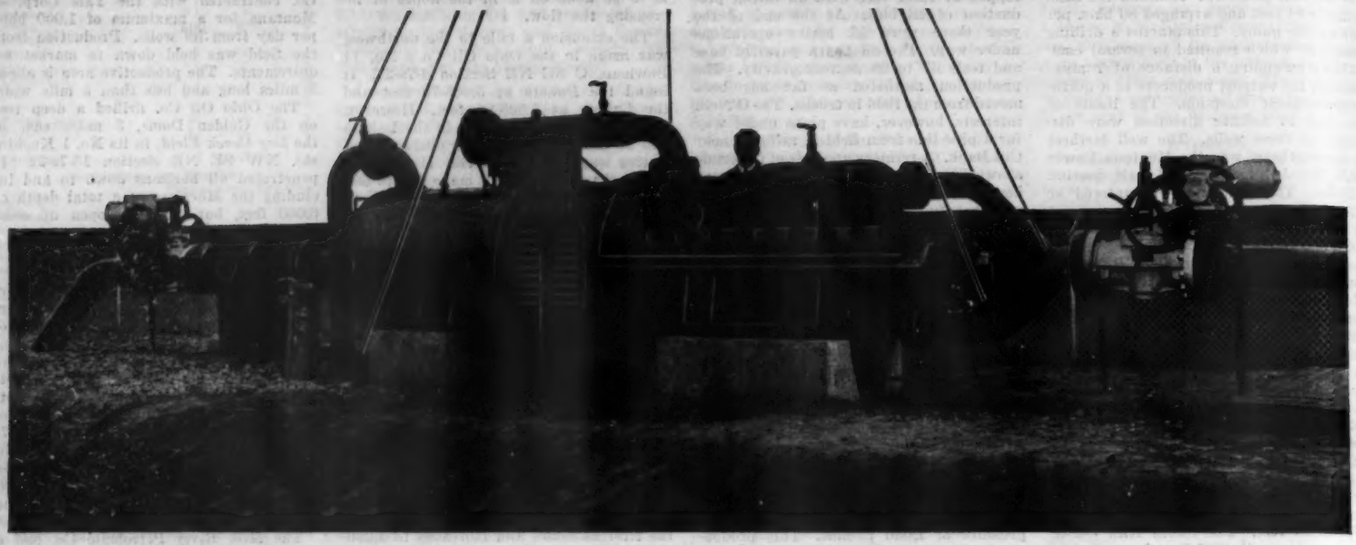
The Milk River Petroleum Co. had a failure in its No. 1 Blackfeet, SW NE

## Wyoming

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BIG MUDDY: | | | | | | | | | | | | | |
| Daily average | 1,620 | 1,660 | 1,511 | 1,616 | 1,712 | 1,666 | 1,507 | 1,611 | 1,655 | 1,880 | 1,777 | 1,683 | |
| Month | 50,220 | 48,140 | 46,841 | 48,480 | 53,072 | 49,980 | 46,717 | 49,941 | 49,650 | 58,280 | 53,310 | 52,172 | 606,804 |
| DALLAS-DERBY: | | | | | | | | | | | | | |
| Daily average | 465 | 376 | 580 | 593 | 583 | 586 | 510 | 478 | 438 | 483 | 433 | 462 | |
| Month | 14,415 | 10,904 | 17,980 | 17,790 | 18,073 | 17,580 | 15,810 | 14,818 | 13,140 | 14,973 | 12,990 | 14,322 | 182,796 |
| DUTTON CREEK: | | | | | | | | | | | | | |
| Daily average | 33 | 34 | 71 | 49 | 69 | 71 | 79 | 77 | 79 | 77 | 77 | 80 | |
| Month | 992 | 986 | 2,201 | 1,470 | 2,139 | 2,130 | 2,449 | 2,387 | 2,370 | 2,387 | 2,310 | 2,480 | 24,301 |
| ELK BASIN: | | | | | | | | | | | | | |
| Daily average | 622 | 632 | 602 | 674 | 658 | 586 | 573 | 543 | 207 | ..... | 409 | 542 | |
| Month | 19,282 | 18,328 | 18,662 | 20,220 | 20,398 | 17,580 | 17,763 | 16,833 | 6,210 | ..... | 12,270 | 16,802 | 184,348 |
| FERRIS: | | | | | | | | | | | | | |
| Daily average | 36 | 28 | 25 | 23 | 21 | 21 | 22 | 21 | 49 | 19 | 16 | 21 | |
| Month | 1,116 | 812 | 775 | 690 | 651 | 630 | 682 | 651 | 1,470 | 589 | 480 | 651 | 9,197 |
| FRANNIE: | | | | | | | | | | | | | |
| Daily average | 317 | 162 | 1,255 | 1,084 | 1,454 | 27 | 151 | 147 | 148 | 131 | 367 | 355 | |
| Month | 9,827 | 4,698 | 38,905 | 32,520 | 45,074 | 810 | 4,681 | 4,557 | 4,440 | 4,061 | 11,010 | 11,005 | 171,588 |
| GRASS CREEK: | | | | | | | | | | | | | |
| Daily average | 337 | 1,995 | 1,934 | 1,202 | 2,022 | 1,424 | 4,186 | 3,836 | 2,541 | 1,169 | 1,490 | 1,298 | |
| Month | 10,447 | 57,855 | 61,504 | 36,060 | 62,682 | 42,720 | 129,766 | 118,916 | 76,230 | 36,239 | 44,700 | 40,238 | 717,357 |
| HAMILTON: | | | | | | | | | | | | | |
| Daily average | 735 | 730 | 728 | 726 | 736 | 922 | 879 | 859 | 978 | 784 | 665 | 520 | |
| Month | 22,785 | 21,170 | 22,878 | 21,780 | 22,816 | 27,660 | 27,249 | 26,629 | 29,340 | 24,304 | 19,950 | 16,120 | 282,681 |
| HUDSON: | | | | | | | | | | | | | |
| Daily average | 449 | 413 | 425 | 476 | 453 | 349 | 425 | 421 | 373 | 343 | 384 | 382 | |
| Month | 13,919 | 11,977 | 13,175 | 14,280 | 14,043 | 10,470 | 13,175 | 13,051 | 11,190 | 10,633 | 11,520 | 11,842 | 149,275 |
| LABARGE: | | | | | | | | | | | | | |
| Daily average | 1,048 | 1,119 | 1,123 | 1,081 | 1,110 | 844 | 1,040 | 1,060 | 1,108 | 1,028 | 1,097 | 958 | |
| Month | 32,488 | 32,451 | 34,813 | 32,430 | 34,410 | 25,320 | 32,240 | 32,860 | 33,240 | 31,868 | 32,910 | 29,698 | 384,728 |
| LANCE CREEK: | | | | | | | | | | | | | |
| Daily average | 116 | 101 | 96 | 110 | 106 | 164 | 97 | 114 | 23 | 107 | 67 | 102 | |
| Month | 3,596 | 2,929 | 2,976 | 3,300 | 3,286 | 4,920 | 3,007 | 3,534 | 690 | 3,317 | 2,010 | 3,162 | 36,727 |
| LOST SOLDIER: | | | | | | | | | | | | | |
| Daily average | 3,229 | 2,990 | 2,625 | 3,112 | 2,634 | 2,575 | 2,051 | 2,243 | 2,528 | 2,286 | 2,168 | 2,389 | |
| Month | 100,099 | 86,710 | 81,375 | 93,360 | 63,054 | 77,250 | 63,581 | 69,533 | 75,840 | 70,866 | 65,040 | 74,059 | 920,767 |
| POISON SPIDER: | | | | | | | | | | | | | |
| Daily average | 31 | 26 | 86 | 37 | 80 | 89 | 86 | 83 | 83 | 68 | 72 | 60 | |
| Month | 961 | 754 | 2,666 | 1,110 | 2,480 | 2,670 | 2,480 | 2,573 | 2,490 | 2,108 | 2,160 | 1,860 | 24,312 |
| OREGON BASIN: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | 910 | ..... | 206 | ..... | 237 | 290 | 818 | 696 | 293 | 343 | |
| Month | ..... | ..... | 28,210 | ..... | 6,386 | ..... | 7,347 | 8,990 | 24,540 | 21,576 | 8,790 | 10,633 | 116,472 |
| OSAGE: | | | | | | | | | | | | | |
| Daily average | 554 | 1,136 | 954 | 931 | 936 | 950 | 839 | 744 | 1,139 | 1,042 | 519 | 878 | |
| Month | 17,174 | 32,944 | 29,574 | 27,930 | 29,016 | 28,500 | 26,009 | 23,064 | 34,170 | 32,302 | 15,570 | 27,218 | 323,471 |
| ROCK CREEK: | | | | | | | | | | | | | |
| Daily average | 1,575 | 1,608 | 1,625 | 1,665 | 1,718 | 1,195 | 1,124 | 1,159 | 989 | 984 | 997 | 1,002 | |
| Month | 48,825 | 46,632 | 50,375 | 49,950 | 53,258 | 35,850 | 34,844 | 35,929 | 29,670 | 30,504 | 29,910 | 31,062 | 476,809 |
| SALT CREEK: | | | | | | | | | | | | | |
| Daily average | 20,250 | 23,287 | 22,584 | 22,015 | 22,226 | 21,875 | 22,106 | 21,964 | 21,376 | 20,134 | 21,639 | 20,282 | |
| Month | 627,750 | 675,323 | 700,104 | 660,450 | 689,006 | 656,250 | 685,286 | 680,884 | 641,280 | 624,154 | 649,170 | 628,742 | 7,918,399 |
| BYRON-GARLAND: | | | | | | | | | | | | | |
| Daily average | 1,007 | 1,262 | 1,077 | 1,306 | 1,108 | 1,429 | 1,104 | 1,017 | 1,112 | 1,101 | 901 | 45 | |
| Month | 31,217 | 36,627 | 33,387 | 39,180 | 34,348 | 42,870 | 34,224 | 31,527 | 33,360 | 34,131 | 27,030 | 1,395 | 379,296 |
| PILOT BUTTE: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 16 | ..... | ..... | 31 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 480 | ..... | ..... | 961 | 1,441 |
| TEAPOT: | | | | | | | | | | | | | |
| Daily average | 12 | 24 | 12 | 25 | 18 | 20 | 47 | 26 | 28 | 21 | 26 | 26 | |
| Month | 372 | 696 | 372 | 750 | 558 | 600 | 1,457 | 806 | 840 | 651 | 780 | 806 | 8,688 |
| GREYBULL: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 859 | ..... | ..... | 9 | 61 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 26,629 | ..... | ..... | 270 | 1,891 | 28,790 |
| MIDWAY: | | | | | | | | | | | | | |
| Daily average | 113 | 61 | 65 | ..... | 32 | 94 | 65 | 68 | 94 | 95 | 82 | 84 | |
| Month | 3,503 | 1,769 | 2,015 | ..... | 992 | 2,820 | 2,015 | 2,108 | 2,820 | 2,945 | 2,460 | 2,604 | 26,051 |
| MULE CREEK: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 52 | 40 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,560 | 1,240 | 2,800 |
| BADGER BASIN: | | | | | | | | | | | | | |
| Daily average | 47 | 48 | 39 | 52 | 51 | 49 | 48 | 45 | 51 | 48 | 50 | 51 | |
| Month | 1,457 | 1,392 | 1,209 | 1,560 | 1,581 | 1,470 | 1,488 | 1,395 | 1,530 | 1,488 | 1,500 | 1,581 | 17,651 |
| Daily average | 32,595 | 37,693 | 38,387 | 36,777 | 37,333 | 34,936 | 37,170 | 37,665 | 35,823 | 32,496 | 33,590 | 31,695 | 32,773 |
| Total 1932 | 1,010,445 | 1,093,097 | 1,189,997 | 1,103,310 | 1,157,323 | 1,048,080 | 1,152,270 | 1,167,615 | 1,074,990 | 1,007,376 | 1,007,700 | 982,545 | 12,994,748 |
| Total 1931 | 1,358,234 | 1,254,668 | 1,264,366 | 1,329,390 | 1,329,652 | 1,278,720 | 1,225,802 | 1,173,784 | 1,110,930 | 1,102,267 | 1,119,450 | 1,145,109 | 14,692,372 |
| Total 1930 | 1,430,899 | 1,409,184 | 1,587,665 | 1,527,930 | 1,565,283 | 1,406,850 | 1,464,378 | 1,449,436 | 1,512,690 | 1,516,489 | 1,384,530 | 1,484,684 | 17,740,017 |
| Total 1929 | 1,512,087 | 1,442,336 | 1,599,104 | 1,490,430 | 1,581,806 | 1,520,160 | 1,674,434 | 1,764,396 | 1,652,760 | 1,643,775 | 1,586,700 | 1,603,630 | 19,071,618 |
| Total 1928 | 1,756,505 | 1,598,602 | 1,714,889 | 1,748,520 | 1,908,918 | 1,834,410 | 1,852,684 | 1,909,476 | 1,791,900 | 1,915,397 | 1,762,980 | 1,609,179 | 21,403,460 |
| Total 1927 | 1,870,727 | 1,678,180 | 1,840,439 | 1,838,070 | 1,896,301 | 1,852,920 | 1,898,626 | 1,888,725 | 1,577,700 | 1,550,620 | 1,563,210 | 1,728,157 | 20,983,675 |

# TUBE-TURNS



The Rannett Pump, invented by Mr. D. J. Moran, President of the Continental Oil Company, and Mr. E. O. Bennett, Chief Engineer of the same corporation. Read the full details on Page 12, Oil and Gas Journal, September 29, 1932.

## chosen for new pumping unit

BECAUSE of the care and skill with which *all* materials for the new Rannett Pump were selected, the choice of Tube-Turns indicates clearly the high opinion in which these modern welding pipe-fittings are held among the best engineering minds in the industry.

Designed for automatic, continuous operation, the Rannett Pump *must* be free from "weak links" . . . . Tube-Turns, having uniform, stress-free walls and therefore uniform strength at all points, guarantee the highest possible dependability, not only in the fitting *but also in the weld itself* *. In addition, the easy radius and smooth inner walls of Tube-Turns assure *lowest resistance to flow*. . . .

And there are other reasons why Tube-Turns are found, almost without exception, in the really outstanding engineering works of the day. Write for all the facts about these super welding fittings that still sell at competitive prices, also the complete line of other Tube-Turn fittings for pipe welding—forged steel welding neck flanges, slip-on flanges, Van Stone welding nipples, welding tees, welding reducers and welding heads. *Address:* Tube-Turns, *Incorporated*, 1311 S. Shelby St., Louisville, Ky.

**TUBE-TURNS**

***UNIFORM WALL-THICKNESS** is *essential* in obtaining: (1) **Satisfactory Joints.** Regardless of the workmanship or materials used, no welder can consistently make good joints unless the fitting lines up with the pipe—in *O. D., I. D., and wall thickness at the weld.* . . . Thickened walls also increase time and cost of welding. (2) **Full-Life Piping.** Corrosion and erosion are always most severe at *the back* (outside) *wall* of a fitting. Thinning at this point *reduces life.*

* Tube-Turns have *uniform wall-thickness*—ALWAYS within A. S. T. M. tolerances *at all points.* No thinning of outside walls. No thickening of inside walls.

NE Section 28-36n-12w, on the Milk River structure in the Blackfeet Indian Reservation in Glacier County. It suspended drilling in a fault at a depth of 4,250 feet. It found more than 1,000 feet of the Kootenai. Another test is probable.

**MONTANA**

**Summary of Wells Completed in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Broadwater | 1 | 0 | 1 | 0 |
| Cascade | 2 | 0 | 2 | 0 |
| Carbon | 6 | 6,031 | 1 | 0 |
| Fallon | 1 | 0 | 1 | 0 |
| Fergus | 1 | 0 | 1 | 0 |
| Glacier | 10 | 641 | 1 | 3 |
| Liberty | 8 | 183 | 6 | 0 |
| Musselshell | 3 | 0 | 3 | 0 |
| Pondera | 2 | 50 | 1 | 0 |
| Petroleum | 1 | 0 | 1 | 0 |
| Teton | 1 | 0 | 1 | 0 |
| Toole | 25 | 2,102 | 6 | 3 |
| Yellowstone | 1 | 0 | 1 | 0 |
| Total, 1932 | 62 | 9,057 | 26 | 6 |
| Total, 1931 | 96 | 809 | 47 | 36 |
| Difference | 34 | 8,248 | 21 | 30 |

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 6 | 3,936 | 1 | 1 |
| February | 2 | 60 | 1 | 0 |
| March | 0 | 0 | 0 | 0 |
| April | 1 | 0 | 1 | 0 |
| May | 3 | 1,350 | 1 | 0 |
| June | 2 | 10 | 1 | 0 |
| July | 5 | 272 | 1 | 0 |
| August | 8 | 1,600 | 4 | 1 |
| September | 7 | 60 | 4 | 1 |
| October | 9 | 545 | 5 | 2 |
| November | 10 | 553 | 4 | 0 |
| December | 9 | 670 | 3 | 1 |
| Total | 62 | 9,507 | 26 | 6 |

## UTAH

Drilling in Utah in 1932 was confined to less than half a dozen wells. One completion, a small producer at a shallow depth, was reported in Washington County. The most important wildcat in the State was drilled by the Utah Southern Oil Co. in its No. 1 Balsey, C NE NE Section 31-23-21, on the Salt Valley structure in Grand County. It was intended as a test of the lower Pennsylvanian and Ordovician below the thick salt beds. Salt was almost continuous from 900 feet to bottom at 6,120 feet, where it was abandoned. At 3,500 feet it had a good show of oil and bailed 302 bbls. of 37 gravity crude in two and one-half days. It stopped in black Muddy shale and salt, having reached the capacity of the rig without testing the lowest objective. The Arrowhead Petroleum Co. abandoned a test on the Punchbowl structure in Washington County in its No. 1, SE SW NE Section 1-43-15w, at an undisclosed depth. Last report gave depth at 1,560 feet, after which it was reported to have a show of oil and gas with water.

**UTAH**

**Summary of Wells Completed in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Washington | 1 | 35 | 0 | 0 |
| Total, 1932 | 1 | 35 | 0 | 0 |
| Total, 1931 | 2 | 0 | 2 | 0 |
| Difference | 1 | 35 | 2 | 0 |

**Summary by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| June | 1 | 35 | 0 | 0 |
| All others | 0 | 0 | 0 | 0 |
| Total | 1 | 35 | 0 | 0 |

## WASHINGTON

No discovery of importance was reported in Washington. The Ohio Oil Co. drilled a deep test with rotary equipment in its No. 1-A Robinson, Section 5-17n-9w, on the Aberdeen-Hoquiam structure in Gray's Harbor County. It went to 6,725 feet when it began plugging back to test several shows on the way up. It had numerous gas shows in shale and one in sand at 4,278 feet which will be tested. When unloaded at a total depth of 6,725 feet it made 4,000 bbls. of hot water.

The Leslie Petroleum Co.'s No. 1 Sims, Section 12-26n-14w, Hoh River district, which late in 1931 attracted considerable attention with shows in upper sands good for 50 bbls. per day, was deepened to 2,069 feet without encountering anything more of value. At that depth the Olympic Petroleum Corp. took over the operation with the intentions of drilling it deeper the coming spring.

# Greatest Production Year in Michigan Due to Many Big Wells in Mt. Pleasant Field

By PAUL A. ELLIOTT

Total oil production of the Mount Pleasant Field of Central Michigan was more than doubled in 1932, by far the biggest year in the oil industry in Michigan.

During the past 12 months the Mount Pleasant Field produced about 6,200,000 bbls. of oil, or more than the aggregate of all Central Michigan wells since the field was opened in the spring of 1928.

Daily production has varied from 18,000 to 24,000 bbls. with an average of more than 20,000 bbls. a day. At an average of 75 cents a barrel this has meant $15,000 a day, or more than $4,500,000 to the producers and royalty owners.

The most important new extension of the year resulted when the Pure Oil Co.'s No. 1 Mattie Yost and others, located in the S three-quarters of the W half of Section 35-14n-2w, Greendale Township, Midland County, was drilled into the Dundee formation with an initial production of 1,127 bbls. a day early in December.

This well, located about 4 miles south of the proved Greendale-Isabella Pool, the original producing area in the Mount Pleasant Field, is believed to have opened an entirely new pool. The Pure Oil and Shell Petroleum Co. control most of the leases in the vicinity of the well.

The Pure Oil Co. has started the first offset, No. 1-B Yost, and will soon start another offset to be called the 2-A Yost.

### Acid Increased Production

Many new completions averaging more than 1,000 bbls. a day initial flow were brought in during the first half of the year in the prolific East Pool opened in July, 1931. During the last five or six months many smaller wells were completed but were greatly increased in production by the use of acid, also introduced with satisfactory results in the Muskegon Field.

An example of the use of acid in new completions is the Columbia Oil & Gas Co.'s No. 1 Gilson-Fales, NE NE SE Section 16, Greendale Township, which was boosted from 125 bbls. per day, natural, to about 1,000 bbls. per day.

During the year much of the profitable area in the East Pool has been drilled, making it essential to locate new production, such as is indicated in the Pure Oil Co.'s No. 1 Yost, to keep production of Central Michigan up in 1933.

When 1932 opened the Pure Oil Pipe Line Co. enforced a certain percentage of proration but as new markets were developed for Michigan crude all wells were allowed to produce at capacity.

### Natural Gas Development

Although there was comparatively little change in the available supply of natural gas in Central Michigan during 1932 the demand for an outlet for some of the present potential production resulted in several important developments toward the close of the year.

At the outset of 1933 the Michigan Natural Gas Co. is preparing to launch a $200,000 drilling campaign in conjunction with the Pure Oil Co. to determine the gas reserves of the area before laying a pipe line to Bay City and Saginaw authorized by the Michigan Public Utilities Commission on December 20, 1932.

The company originally asked for a permit to lay a line to Saginaw, Bay City, Flint, Pontiac and possibly to Detroit. The commission approved a line only to the nearest cities located about 40 miles from the field. The original plan called for a 14-inch line to cost about $3,000,000 installed.

Since the opening of the Mount Pleasant Field in 1928 about 350 oil wells, but only 27 dry gas wells, have been drilled. Three distinct gas pools have been located by the 27 wells which have an aggregate open flow of about 100,000,000 cubic feet a day.

It is estimated that sufficient casinghead gas is being wasted from the oil producers to supply Saginaw and Bay City without the dry gas. The flow is estimated at more than 12,000,000 feet a day. About 3,000,000 feet a day is being run through a natural gasoline plant operated in the field by Muskegon interests.

It is estimated that Bay City and Saginaw will use about 3,000,000 feet a day for domestic purposes and another 10,000,000 feet for industrial purposes.

Negotiations also are under way to pipe natural gas to several villages and small cities near the field, including Ithaca, Alma, St. Louis, St. Johns, Breckenridge, Merrill, Wheeler, Hemlock and Shepherd.

The Michigan Natural Gas Corp. has a tentative agreement with the Michigan Federated Utilities, now serving these towns with manufactured gas, to supply them with natural gas.

The Miller-McCloskey interests, competitors of the Michigan Natural Gas Corp., however, have obtained approval of 30-year franchises from the councils of Alma, St. Johns and Shepherd pending special votes by the people later this month.

The Michigan Public Utilities Commission is awaiting the outcome of these votes before hearing any further applications to lay lines for natural gas.

The Michigan Natural Gas Corp. has a tentative agreement with the Consumers Power Co. to supply natural gas to Bay City and Saginaw.

### Wildcatting in Central Michigan

The two most important wildcat strikes in Central and Central Eastern Michigan were brought in with an initial production of about 10 bbls. a day each during the last month of 1932.

The Smith Petroleum Co.'s No. 1 Johns, in Section 21, Birch Run Township, Saginaw County, located about 5 miles from the old Saginaw Field, which was the first commercial oil field ever to be opened in Michigan, in 1925, made 10 bbls. a day in the Berea sand after being shot.

The Theodore Oil Co.'s No. 1 Thompson Brothers, located in Section 35, Greenwood Township, Clare County, 3 miles southwest of the village of Harrison and 6 miles north of the Clare County gas wells, made 10 bbls. a day in the Dundee at 4,215 feet. It is the first Clare County well to have any appreciable showing of oil although several good gassers have previously been developed in Grant Township by the McKay and Mercier interests.

### Muskegon Oil Field

The outstanding new development of the year in the Muskegon Field was the use of acid to stimulate production with the result that both the oil and gas output was more than doubled at the height of the first general treatment of wells throughout the field.

Daily oil production which had averaged 1,000 bbls. for the first eight months jumped to a maximum of more than 2,000 bbls. in September several weeks after acid treatment was started. Potential daily gas flow increased to an estimated 3,000,000 feet a day with more than one-third of it going into the air through gas flares for lack of an adequate and immedintely available market.

By the end of the year, however, oil and gas production had settled back to about the same figures as a year ago, or 1,200 bbls. of oil and 1,000,000 feet a day of gas of a maximum potential of not more than 1,500,000 feet.

During the year about 400,000 bbls. of oil were produced at an average of 85 cents a barrel to the operators and royalty owners, while 300,000,000 feet of gas at the prevailing prices of 12 to 15 cents per 1,000 feet will have netted the producers about $40,000 additional.

Oil production of three Dundee wells of the Eureka Gas & Oil Co. in the Laketon Township area of the Muskegon, Mich., Field was increased 69 per cent during the past 30 days in the first official vacuum test for oil production in Michigan.

Results of the test which started December 17 ended January 13 were announced by C. Harold Riggs, local representative of the State Conservation Department, oil and gas division. It was announced that vacuum production of the wells will be discontinued until February 13 to study the effects of using vacuum on local wells.

Contrary to the expectations of some producers adjoining wells were not appreciably affected and water production was not increased as much as the oil. Water production increased only 20 per cent compared with the 69 per cent increase in oil.

### Natural Gas

The West Michigan Consumers Co., largest natural gas line operators in the field, handled about 253,000,000 feet, or an average of 21,000,000 feet a month, delivering it to a group of industries for varied purposes. The present average daily send out is 750,000 feet.

The B.t.u. content of the casinghead gas has risen to 1,500 during the year. Mixed with dry Monroe gas at 1,150 B.t.u. it makes an average of about 1,300 B.t.u. The Monroe gas is very nearly a true dry gas containing about 80 per cent methane and 20 per cent ethane.

Upper and lower Traverse gas still comprises about 50 per cent of the total. Dundee gas has dropped to a comparatively small figure particularly since the use of the acid, while Monroe gas comprises a greater part of the supply than a year ago. A gas-oil ratio of about 10,000 feet per barrel has been maintained.

The West Michigan Co. has sold a total of 2,209,000,000 feet of gas since 1929, paying the producers about $240,000. A large part of the company's production now is purchased at 12 cents per 1,000 feet. Some of the new production is bringing 15 cents at the well.

**MICHIGAN FIELDS**

**Summary of Wells Completed in 1932**

| Month— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| January | 9 | 1,035 | 2 | 5 | 2 |
| February | 7 | 20 | 5 | 1 | 1 |
| March | 8 | 4,015 | 4 | 0 | 4 |
| April | 16 | 18,295 | 5 | 1 | 10 |
| May | 14 | 12,495 | 3 | 0 | 11 |
| June | 12 | 5,795 | 3 | 0 | 9 |
| July | 15 | 3,400 | 4 | 1 | 10 |
| August | 14 | 5,310 | 3 | 2 | 9 |
| September | 29 | 12,113 | 12 | 0 | 17 |
| October | 21 | 4,812 | 2 | 1 | 18 |
| November | 9 | 2,105 | 1 | 0 | 8 |
| December | 20 | 3,835 | 6 | 0 | 14 |
| Total 1932 | 174 | 73,120 | 50 | 11 | 113 |
| Total 1931 | 127 | 38,947 | 48 | 30 | 49 |
| Difference | 47 | 34,173 | 2 | 19 | 64 |

**Summary by Counties**

| County— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| Isabella | 18 | 1,390 | 6 | 4 | 8 |
| Midland | 125 | 71,610 | 23 | 0 | 102 |
| Clare | 4 | 0 | 2 | 2 | 0 |
| Muskegon | 3 | 0 | 2 | 1 | 0 |
| Allegan | 2 | 0 | 0 | 2 | 0 |
| Mecosta | 2 | 0 | 2 | 0 | 0 |
| Huron | 2 | 0 | 2 | 0 | 0 |
| Macomb | 1 | 0 | 0 | 1 | 0 |
| Monroe | 1 | 0 | 1 | 0 | 0 |
| Lenawee | 2 | 0 | 1 | 1 | 0 |
| Washtenaw | 1 | 0 | 1 | 0 | 0 |
| Ogemaw | 1 | 10 | 0 | 0 | 1 |
| Livingston | 2 | 0 | 2 | 0 | 0 |
| Newyago | 1 | 0 | 1 | 0 | 0 |
| Oceana | 3 | 100 | 2 | 0 | 1 |
| Saginaw | 4 | 10 | 3 | 0 | 1 |
| Missaukee | 2 | 0 | 2 | 0 | 0 |
| Total | 174 | 73,120 | 50 | 11 | 113 |

# Busy Year in Southwest Texas Resulted in Many New Pools Some of Which Are Important

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

Completions in Southwest Texas increased 44 per cent in 1932 over the record for 1931 and initial production increased 87 per cent. It was a year with the usual number of new discoveries, the most important of which were the new pools in northern Duval County in the Government Wells group, the new Laurel Pool in Webb County, the Rio Grande City Pool in Starr County and the Tuleta Pool in Bee County.

In spite of the increased activity the year fell considerably short of the peak year of 1930 when there were 1,193 completions with a total initial production of 430,393 bbls. Comparisons back to 1927 are as follows:

| Year— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| 1932 | 900 | 121,836 | 471 | 49 |
| 1931 | 624 | 65,114 | 380 | 51 |
| 1930 | 1,193 | 430,393 | 512 | 96 |
| 1929 | 1,136 | 187,144 | 472 | 143 |
| 1928 | 742 | 43,878 | 211 | 200 |
| 1927 | 868 | 12,762 | 394 | 181 |

Duval, Zapata and Starr Counties held the center of interest throughout the year with Bee County coming in for some attention and also the Saxet Field in Nueces County seeing some new development. The other 40 or so counties in Southwest Texas in which there has been drilling have seen only a relatively small amount of activity so far as number of tests are concerned.

Seventeen wildcat wells were brought in as producers during the year, opening as many new pools, and in addition there were extensions to two fields and several new sands found in old fields, especially in Saxet in Nueces County.

### Northern Duval County

In northern Duval County Smith & Capps' No. 1 Duval County Ranch Co. came in for 40,000,000 feet of gas at 2,413 feet. This well is in Survey No. 576, a couple of miles southwest of the south extension to the Government Wells Pool, and producing from the same sand. Their No. 1-A, completed a little northeast of it in Survey No. 574, came in producing oil which fixed the field as an oil field.

Production in this pool, as well as in the North Government Wells Pool, discovered a little later in the year, is from a sand in the McElroy or Hockley of the Jackson series and the depth varies but slightly in all four of the Government Wells group. The Smith & Capps No. 1, the gasser, in Survey No. 576, came in late in April. The pool was named the Sarnosa Pool. There was not the call for offset wells that existed in some pools, which has delayed development in this pool, but some failures have seemed to indicate that it will not be a large pool. At the close of the year there were 10 producing wells and a total aggregate production of around 200,000 bbls. down to the last of December.

There were two discovery wells in the North Government Wells Pool. Seacord & Putnam completed No. 1 Johnson, 150 feet from the south and west lines of the NW of Survey No. 44, in what is known in the Laredo district as the Cole sand, at 1,567-74 feet for 10,000,000 feet of gas. This was notable for it was the first time the Cole sand had been found productive outside of the Cole Field. This Cole sand comes in either at the base of the Frio clay or top of the Fayette. The No. 1 Johnson was completed in April a week or two before the Smith & Capps No. 1 Duval County Ranch Co. in Survey 576 opening the Sarnosa Pool.

### Government Wells Discovery

J. S. Suttle late in June drilled the No. 1 O. Bennett, 150 feet from the north and east lines of the southwest quarter of Survey No. 44, a little southeast of the Seacord & Putnam test and in sand at 2,311 feet total depth, and only 1 foot in the sand got an oil well that gauged 2,800 bbls. a day on five-eighths inch choke. This is the same sand as that producing in the Sarnosa, Government Wells and South Government Wells Pools. Seacord & Putnam later carried their test to this sand and got an oil well.

This opened the North Government Wells Pool, which by the close of December had over 80 producing wells and was producing close under 200,000 bbls. a month with a total aggregate production since the discovery of the pool of around 800,000 bbls.

Furthermore, with the possible exception of the east side, the limits of this field are not marked by dry holes nearer than a mile to the west and none on the north and south. The field is far from being drilled up and will be a leading feature in the production column from Southwest Texas for some time to come. The oil is typical Laredo district crude of around 22 gravity.

The field is now about 3 miles long and a mile wide, which dimension as to length does not take into consideration the Bissonett and McGinley Corp.'s No. 1 Lundell in Survey No. 48, a producer in the same sand and located a mile and a half to the southwest and with no dry holes between. There seems every possibility that it may extend that far.

Three miles north and one mile east of the North Government Wells Pool Sun Oil Co.'s No. 1 Duval County Ranch Co., 1,650 feet from north and west lines of Survey No. 78, in sand at 2,159-67 feet made a small well and was put on the pump. It made about 5 bbls. in 24 hours.

### Laurel Pool in Webb

A very important discovery was the Laurel Pool opened by Phillip Rosenberg of Denver, who since has organized his operations as the South Texas Oil Co. This new pool is of high gravity oil, of around 48 degrees, and is bringing a premium and being shipped to Canadian refineries. The discovery well, completed June 22, after a renumbering of tests in the field, is carried as No. 3 Laurel, 150 feet from the east line and 549 feet from the north line of Block No. 10 of Survey No. 271. It was completed in sand at 2,240-44 feet and came in for 350 bbls. a day. Since then two 1,000-bbl. wells have been drilled one and two locations to the east in Survey No. 270, and late in December Dyck Oil Co. of Tulsa, Okla., completed a 1,500-bbl. well, the No. 1 Garcia and Villareal in Survey No. 1,100, a mile due south. Other than this all the oil wells thus far have been drilled by Rosenberg interests. The field has been slow in developing, as there was no necessity for offsets at first. Late in December with eight wells the production was around 20,000 bbls. for the month and the field had produced about 60,000 bbls. since the completion of the discovery well.

The field cannot be said to be defined in any direction except on the west, where one test has been abandoned. The best producers have been completed on the east and south. Hamill & Hamill drilled one test a mile north which got only a few feet of sand and was abandoned, though it showed saturation. It may indicate the northwest limits. Nothing reasonably close has been drilled in other directions.

### Northwestern Webb County

Late in the month of December the Milam Drilling Co. brought in a shallow producer pumping about 100 bbls. a day in northeastern Webb County, several miles from any production. It is No. 1 Duval County Ranch Co., 2,020 feet from the east line and 5,000 feet from the south line of Zapata County School Land Survey No. 3. It set casing at 902 feet and had sand at 885-909 feet, the upper part of the sand showing gas. It is west of and on a parallel line of folding with the Government Wells group. The pool has been named the Moca Pool and at the close of the year no additional tests had been started. It is about 12 miles due west of the original Government Wells Pool and on a line of folding paralleling that of the Government Wells group.

**SOUTHWEST TEXAS**

**Summary of Completions for the Year 1932**

| Pools— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Aviator | 2 | 0 | 0 | 2 |
| Alta Mesa | 1 | 0 | 0 | 1 |
| Bruner | 1 | 18 | 0 | 0 |
| Chapman | 1 | 16 | 0 | 0 |
| Charco Redondo | 3 | 4 | 1 | 0 |
| Cooksey | 10 | 122 | 0 | 0 |
| Cole | 5 | 60 | 2 | 1 |
| Coseden | 2 | 41 | 1 | 0 |
| Darst Creek | 7 | 3,283 | 2 | 0 |
| Dunlap | 5 | 480 | 3 | 0 |
| Eckert | 20 | 122 | 1 | 2 |
| Escobas | 92 | 5,847 | 27 | 4 |
| Government Wells | 110 | 75,156 | 5 | 3 |
| Jacob | 10 | 530 | 3 | 0 |
| King | 2 | 0 | 0 | 2 |
| Los Almos | 100 | 1,908 | 44 | 2 |
| Mirando | 29 | 3,297 | 5 | 3 |
| Mirando Valley | 3 | 0 | 3 | 0 |
| Normanna | 2 | 75 | 1 | 0 |
| N. Pettus | 2 | 325 | 0 | 0 |
| Pettus | 28 | 8,600 | 5 | 2 |
| Rio Grande | 25 | 315 | 20 | 0 |
| Laurel | 8 | 2,975 | 0 | 1 |
| Sarnosa | 15 | 4,824 | 5 | 1 |
| Sal-Mar | 2 | 0 | 2 | 0 |
| Saxet | 26 | 2,677 | 8 | 5 |
| Slick | 3 | 0 | 1 | 2 |
| S.R.C. | 1 | 0 | 1 | 0 |
| Tuleta | 9 | 1,344 | 3 | 1 |
| Webster | 2 | 650 | 0 | 0 |
| Wentz | 1 | 0 | 1 | 0 |
| Schimmel | 2 | 30 | 1 | 0 |
| West Cole | 7 | 610 | 0 | 0 |
| White Point | 2 | 0 | 0 | 2 |
| Yost Field | 1 | 20 | 0 | 0 |
| Miscellaneous | 361 | 8,508 | 326 | 15 |
| Total | 900 | 121,836 | 471 | 49 |

**Completions by the Month**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 50 | 4,994 | 16 | 8 |
| February | 48 | 6,556 | 20 | 6 |
| March | 61 | 2,898 | 21 | 4 |
| April | 77 | 2,558 | 44 | 2 |
| May | 61 | 7,780 | 36 | 2 |
| June | 73 | 8,277 | 42 | 3 |
| July | 113 | 10,636 | 65 | 7 |
| August | 102 | 20,931 | 54 | 6 |
| September | 93 | 13,396 | 38 | 3 |
| October | 65 | 11,094 | 41 | 3 |
| November | 86 | 20,049 | 46 | 3 |
| December | 72 | 12,665 | 38 | 2 |
| Total 1932 | 900 | 121,836 | 471 | 49 |
| Total 1931 | 624 | 65,114 | 380 | 51 |
| Difference | 276 | 56,722 | 91 | 2 |

### Tuleta a Small-Area Pool

For a time the discovery of the Tuleta Pool in northern Bee County looked like an important discovery likely to lead to the development of a pool of considerable size, but wells brought in subsequent to the discovery well have not been so promising and the discovery of a second horizon of production in the Yegua, which seemed promising at first, has not turned out so well.

C. F. Nichols drilled his No. 1 J. P. Harris, the discovery well, 240 feet from the west line and 610 feet from the south line of the SE of Section 2 of the Ragsley Subdivision of the Chittim Miller ranch in the Uranga grant, and it had sand at 4,087-4,104 feet and came in for an initial production of 304 bbls. of pipe line oil the first 12 hours.

The sand has been identified as the sand producing in the Pettus Field, 3 miles north of it, and called locally the Pettus sand but identified as the Cockfield. C.R.&M. Drilling Co. of San Antonio bought a half interest in the well and 30 acres. Additional wells were drilled to the south and early in December, when the Atlantic Pipe Line Co. laid a line to the field, it had a production of about 600 bbls. daily from six wells, one of which, the Wallace & Bowles No. 1 Harris, was producing 297 bbls. daily, or about half of the total. The discovery well and one other were producing over 100 bbls. each and three other were small wells.

Dirks Brothers' No. 1 fee, a half mile west of the discovery well, 165 feet from the south and east lines of Section 3 of the Ragsley Subdivision of the Chittim Miller ranch in the Uranga grant, failed to get pay in the Pettus sand and drilled to the Yegua, where it came in at the rate of 350 bbls. of oil but declined rather rapidly and began making salt water. Two other tests, one northeast of the discovery well and the other south, made salt water in the Yegua and failed of production in the Pettus sand. Dirks Brothers got the Yegua at 4,276-98 feet.

### Jacob Pool in McMullen County

In northeastern McMullen County, Jacob, Buzzini & Pickett drilled No. 2-A Jacob and in sand at 948-62 feet got a well flowing 75 bbls. daily and opening one of the most profitable shallow pools in Southwest Texas. The oil is 20.6 gravity.

The discovery well was completed May 7. Since then several other wells have been completed at about the same depth and a pipe line laid to Whitsett, 7 miles east, and the oil is being shipped to the Republic refinery at Houston. One of the best wells gauged 357 bbls. in 36 hours, flowing. Production is held to less than 100 bbls. per well on the average.

The field is about 7 miles north of the Calliham Field and is about 2 miles east of the old Crowther Pool, which produced from a shallower sand.

What is claimed to have been the first big oil promotion deal of the world, with full page advertisements in New York and Boston papers, was pulled off in this part of McMullen County before the days of Spindletop and the promoters walked over the Jacob Pool.

### Wentz Pool in McMullen

Eight miles southwest of the Calliham Field V. G. Schimmel brought in No. 1 F. A. Hale, an 8,000,000-foot gas well from sand at 370-82 feet, Calliham being the nearest production, and it has been named the Wentz Pool, though he has not further developed the field in that sand. The discovery well is 850 feet from the north line and 1,580 feet from the west line of Survey No. 63. Two other holes have been drilled in an effort to find deeper production.

### Balcones Fault

In the Balcones fault zone five wildcats were drilled that came in producers, two in Bastrop County, two in Caldwell and one in Guadalupe. The discoveries have not been followed up with any intensive drilling campaign.

In Caldwell County C. J. Webster Oil

& Gas Co. drilled the No. 1 McCrory, cut the fault plane and got some oil in the Edwards but failed to complete the hole and moved 75 feet away and drilled No. 1-A McCrory which went into a crevice in the Austin chalk at 2,083-87 feet and came in initially for 350 bbls. a day. This well was completed August 10.

Recently in association with D. V. Smith, No. 1 McMahon was drilled. It found 246 feet of chalk and then went direct to the Edwards lime, and while a failure proves a condition that calls for another well, location for which was being made late in December.

The C. J. Webster Oil & Gas Co.'s No. 1 McCrory was 600 feet due west of the southwest corner of the Abe Lucas tract in the John Neil Survey and with an elevation of 400 feet it topped the Austin chalk at 2,008 feet. No. 1-A McCrory is 75 feet due northwest of No. 1 McCrory. No. 1 McMahon is 1¾ miles northeast.

The area lies on an extension of the Luling Field fault line and between that field and the Dale Field on the northeast.

In the southwestern part of Caldwell County Bob Rose's No. 1 Pierce topped the Austin chalk at 2,050 feet and went into a crevice at 2,114 feet and produced 226 bbls. the first hour and 183 bbls. the third hour. It was pinched in until a pipe line could be laid to Cranfill & Reynolds' refinery north of Luling and never was allowed to produce at full capacity. The oil is 38.9 gravity of about the same quality and character as the Darst Creek and Salt Flats crude. A few wells have since been drilled but those that failed to get into the crevice failed to be producers. The pool is known as the Dunlap Pool. The discovery well is 150 feet from the northwest and southwest lines of the tract in the Solomon Seal Survey.

### Serpentine in Bastrop

In southern Bastrop County two Serpentine pools were opened, both in September. Parsons & Mayfield's No. 1 Carroll Estate, 10 miles southwest of the town of Bastrop, and located 2,050 feet northwest of the northeast corner of the O. B. Lentz 400-acre tract along the southwest line of the J. H. Carroll 535-acre tract, thence 330 feet at right angles northeast and in the Andrew Mays Survey, got the Serpentine at 2,248-2,378 feet and pumped 60 bbls. the first nine hours, but dropped to a 15-bbl. well. Further development has not been started.

Dave Reed and R. R. Ogden's No. 1 Riddle, 350 feet from the east line and 750 feet from the north line of the Riddle 94.5-acre tract in the Joshua Gray Survey several miles south of the Parsons & Mayfield well, got Serpentine at 2,160-2,233 feet and made 90 bbls. daily by heads. Some additional drilling has been started around this well. The oil in both discovery wells is typical Serpentine oil of about 36 gravity.

### Opens New Field

In Guadalupe County Sal-Mar Oil Co. opened a new field, the No. 1 Zunker being 450 feet from the west line and 170 feet from the south line of the tract in the L. Bollinger Survey and about 12 miles east of Seguin. It topped the Austin chalk at 2,022 feet with an elevation of 449 feet and drilled to 2,042 feet, where it was completed and on a five-hour gauge produced at the rate of 216 bbls. daily. It has since declined to a small well and several tests drilled around it have failed to get production.

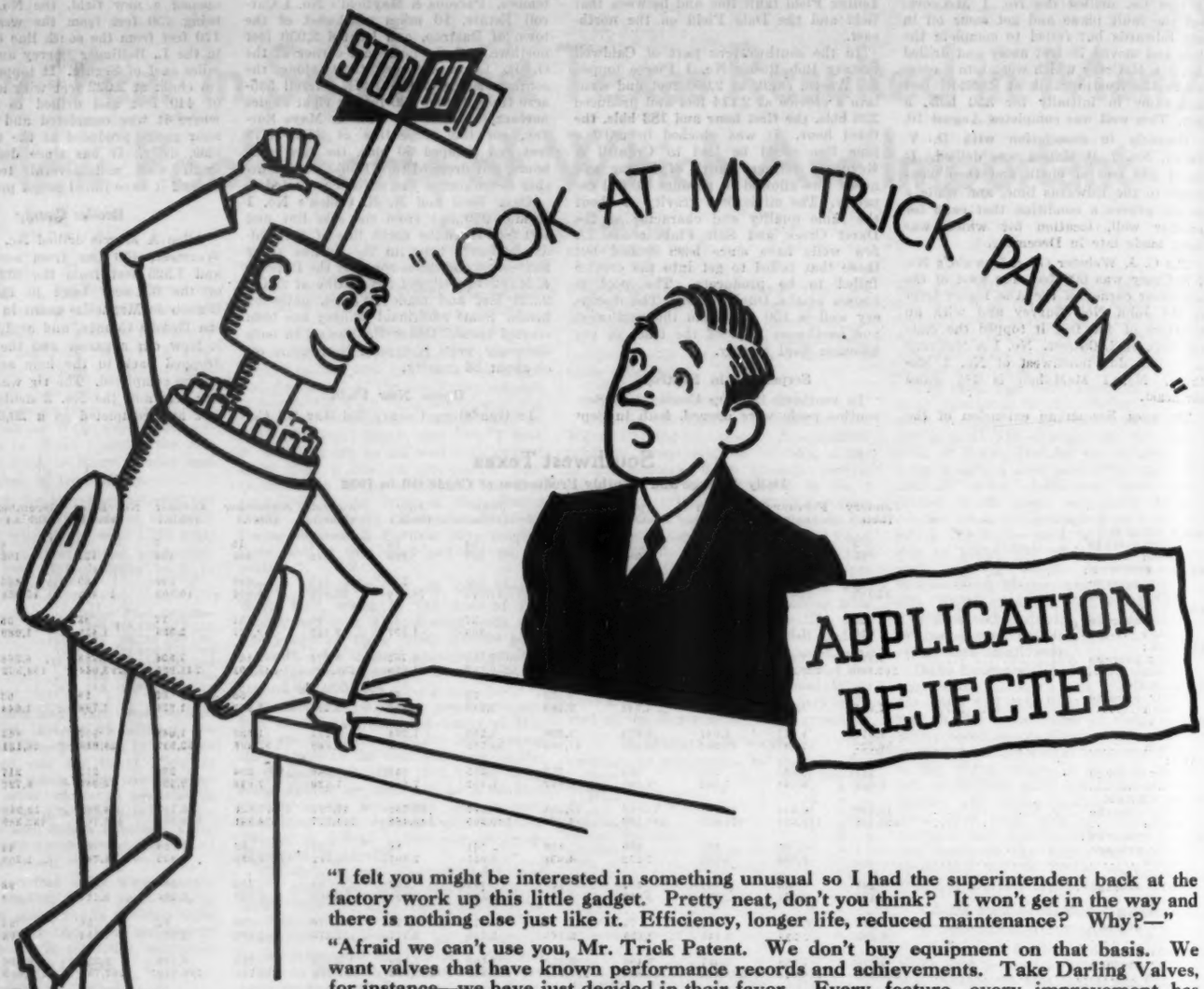
### Brooks County

Allen & Morris drilled No. 1 Holbien-Wormser, 450 feet from northeast line and 7,325 feet from the southeast line of the 952-acre tract in the El Palo Blanco de Maguellas grant in northwestern Brooks County, and at 1,805-19 feet it blew out a gasser and the drill stem dropped back in the hole and it could not be completed. The rig was skidded a few feet and the No. 2 drilled to 1,190 feet and completed as a 20,000,000-foot

## Southwest Texas

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AGUA DULCE: | | | | | | | | | | | | | |
| Daily average | 3 | 10 | 10 | 10 | 10 | 14 | 15 | 12 | 15 | 5 | 4 | 5 | |
| Month | 95 | 293 | 316 | 306 | 315 | 430 | 468 | 376 | 455 | 150 | 125 | 156 | 3,485 |
| BEXAR COUNTY: | | | | | | | | | | | | | |
| Daily average | 393 | 397 | 453 | 427 | 487 | 432 | 538 | 542 | 636 | 500 | 480 | 485 | 176,127 |
| Month | 12,188 | 11,519 | 14,045 | 12,812 | 15,093 | 12,971 | 16,670 | 16,800 | 19,084 | 15,505 | 14,402 | 15,038 | |
| BRANYON: | | | | | | | | | | | | | |
| Daily average | 21 | 60 | 36 | 27 | 27 | 27 | 42 | 95 | 131 | 77 | 48 | 35 | |
| Month | 650 | 1,748 | 1,113 | 810 | 839 | 809 | 1,307 | 2,948 | 3,927 | 2,283 | 1,438 | 1,089 | 19,061 |
| BRUNER: | | | | | | | | | | | | | |
| Daily average | 7,982 | 7,906 | 8,455 | 9,371 | 9,413 | 8,556 | 8,752 | 8,274 | 8,117 | 7,806 | 6,768 | 6,268 | |
| Month | 247,440 | 229,278 | 262,103 | 281,127 | 291,809 | 256,683 | 271,319 | 256,490 | 243,503 | 241,980 | 203,044 | 194,302 | 2,979,078 |
| BUCHANAN: | | | | | | | | | | | | | |
| Daily average | 65 | 67 | 65 | 65 | 73 | 73 | 78 | 74 | 66 | 62 | 59 | 53 | |
| Month | 2,015 | 1,940 | 2,017 | 1,948 | 2,261 | 2,187 | 2,416 | 2,298 | 1,982 | 1,926 | 1,766 | 1,644 | 24,400 |
| CHAPMAN: | | | | | | | | | | | | | |
| Daily average | 1,817 | 1,641 | 1,547 | 1,329 | 1,326 | 1,291 | 1,224 | 1,173 | 1,080 | 1,049 | 967 | 843 | |
| Month | 56,322 | 47,583 | 47,957 | 39,865 | 41,103 | 38,733 | 38,251 | 36,360 | 32,406 | 32,517 | 29,013 | 26,121 | 466,241 |
| DALE: | | | | | | | | | | | | | |
| Daily average | 227 | 233 | 242 | 252 | 213 | 215 | 248 | 246 | 234 | 230 | 213 | 217 | |
| Month | 7,030 | 6,759 | 7,504 | 7,561 | 6,602 | 6,452 | 7,684 | 7,620 | 7,016 | 7,130 | 6,385 | 6,723 | 84,466 |
| DARST CREEK: | | | | | | | | | | | | | |
| Daily average | 16,820 | 17,644 | 15,181 | 17,006 | 17,244 | 18,007 | 17,531 | 17,791 | 17,825 | 16,147 | 14,292 | 13,948 | |
| Month | 521,425 | 511,678 | 470,615 | 510,183 | 534,568 | 540,209 | 543,468 | 551,527 | 534,745 | 500,553 | 428,767 | 432,389 | 6,080,127 |
| GOLIAD COUNTY: | | | | | | | | | | | | | |
| Daily average | ..... | 62 | 103 | 109 | 130 | 101 | 86 | 76 | 63 | 59 | 58 | 44 | |
| Month | ..... | 1,793 | 3,192 | 3,272 | 4,038 | 3,025 | 2,661 | 2,352 | 1,885 | 1,823 | 1,742 | 1,360 | 27,143 |
| KINGSVILLE: | | | | | | | | | | | | | |
| Daily average | 101 | 93 | 87 | 132 | 100 | 111 | 103 | 99 | 100 | 100 | 104 | 98 | |
| Month | 3,138 | 2,694 | 2,699 | 3,963 | 3,111 | 3,336 | 3,191 | 3,065 | 3,010 | 3,106 | 3,117 | 3,039 | 37,459 |
| LARREMORE: | | | | | | | | | | | | | |
| Daily average | 71 | 77 | 79 | 71 | 70 | 70 | 70 | 70 | 70 | 62 | 56 | 55 | |
| Month | 2,205 | 2,239 | 2,445 | 2,129 | 2,163 | 2,115 | 2,177 | 2,175 | 2,102 | 1,922 | 1,684 | 1,708 | 25,064 |
| LULING: | | | | | | | | | | | | | |
| Daily average | 7,510 | 7,480 | 7,467 | 7,496 | 7,233 | 7,165 | 7,429 | 7,314 | 7,030 | 6,999 | 6,925 | 6,906 | |
| Month | 232,812 | 216,928 | 231,478 | 224,884 | 224,229 | 214,945 | 230,393 | 226,730 | 212,708 | 216,970 | 207,748 | 214,089 | 2,653,814 |
| LYTTON SPRINGS: | | | | | | | | | | | | | |
| Daily average | 461 | 566 | 575 | 568 | 590 | 581 | 571 | 606 | 574 | 587 | 587 | 574 | |
| Month | 14,296 | 16,410 | 17,823 | 17,044 | 18,286 | 17,432 | 17,706 | 18,788 | 17,216 | 18,191 | 17,616 | 17,792 | 208,590 |
| MANFORD: | | | | | | | | | | | | | |
| Daily average | 88 | 83 | 94 | 100 | 104 | 104 | 92 | 92 | 85 | 66 | 61 | 71 | |
| Month | 2,720 | 2,408 | 2,914 | 2,995 | 3,223 | 3,109 | 2,859 | 2,858 | 2,546 | 2,048 | 1,823 | 2,206 | 31,709 |
| McMULLEN COUNTY: | | | | | | | | | | | | | |
| Daily average | 19 | 41 | 44 | 43 | 47 | 104 | 119 | 155 | 256 | 33 | 389 | 15 | |
| Month | 582 | 1,184 | 1,365 | 1,293 | 1,455 | 3,131 | 3,681 | 4,805 | 7,674 | 1,021 | 11,673 | 463 | 38,327 |
| TULETA: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 24 | 390 | 561 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 748 | 11,702 | 17,391 | 29,841 |
| MEDINA COUNTY: | | | | | | | | | | | | | |
| Daily average | 22 | 23 | 22 | 22 | 22 | 22 | 24 | 24 | 25 | 23 | 24 | 24 | |
| Month | 685 | 633 | 680 | 665 | 683 | 658 | 742 | 748 | 750 | 715 | 716 | 748 | 8,423 |
| MINERVA: | | | | | | | | | | | | | |
| Daily average | 404 | 404 | 404 | 402 | 404 | 408 | 324 | 320 | 330 | 334 | 334 | 334 | |
| Month | 12,529 | 11,716 | 12,528 | 12,069 | 12,522 | 12,229 | 10,047 | 9,926 | 9,902 | 10,350 | 10,018 | 10,357 | 134,193 |
| MIRANDO DISTRICT: | | | | | | | | | | | | | |
| Daily average | 16,766 | 17,445 | 17,124 | 16,470 | 16,580 | 16,013 | 15,452 | 16,521 | 17,594 | 19,691 | 20,630 | 17,642 | |
| Month | 519,746 | 505,900 | 530,849 | 494,106 | 513,977 | 480,405 | 479,014 | 512,157 | 527,816 | 610,421 | 618,909 | 546,901 | 6,340,301 |
| BATEMAN: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 27 | 73 | 72 | 56 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 810 | 2,267 | 2,161 | 1,739 | 6,977 |
| SAL MAR: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 63 | 145 | 27 | 26 | 13 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,951 | 4,345 | 839 | 785 | 405 | 8,325 |
| PETTUS: | | | | | | | | | | | | | |
| Daily average | 3,873 | 6,742 | 6,035 | 1,032 | 4,518 | 4,608 | 5,013 | 4,385 | 4,363 | 4,188 | 4,124 | 3,975 | |
| Month | 120,060 | 196,515 | 187,085 | 30,960 | 149,354 | 138,226 | 155,406 | 136,930 | 130,885 | 129,824 | 123,718 | 123,222 | 1,620,179 |
| SAXET: | | | | | | | | | | | | | |
| Daily average | 800 | 1,035 | 1,289 | 1,325 | 1,149 | 1,053 | 1,183 | 1,357 | 1,798 | 1,810 | 1,794 | 1,595 | |
| Month | 24,807 | 30,019 | 39,953 | 39,747 | 35,615 | 31,592 | 36,671 | 42,063 | 53,936 | 56,115 | 53,814 | 49,441 | 493,773 |
| SOMERSET: | | | | | | | | | | | | | |
| Daily average | 1,036 | 1,056 | 1,085 | 1,051 | 1,048 | 977 | 1,050 | 1,042 | 1,008 | 1,021 | 1,012 | 1,020 | |
| Month | 32,113 | 30,628 | 33,634 | 31,533 | 32,489 | 29,319 | 32,557 | 32,306 | 30,232 | 31,656 | 30,353 | 31,619 | 378,439 |
| LOS OLMOS: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | 84 | 89 | 84 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| Month | ..... | ..... | 2,603 | 2,666 | 2,601 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7,870 |
| THRALL: | | | | | | | | | | | | | |
| Daily average | 35 | 35 | 32 | 37 | 39 | 38 | 35 | 35 | 35 | 35 | 35 | 37 | |
| Month | 1,080 | 1,013 | 997 | 1,111 | 1,208 | 1,141 | 1,089 | 1,085 | 1,055 | 1,080 | 1,054 | 1,151 | 13,064 |
| WHITE POINT: | | | | | | | | | | | | | |
| Daily average | 52 | 58 | 57 | 51 | 49 | 54 | 53 | 50 | 50 | 50 | 49 | 49 | |
| Month | 1,602 | 1,689 | 1,760 | 1,528 | 1,516 | 1,632 | 1,641 | 1,555 | 1,510 | 1,558 | 1,468 | 1,522 | 18,981 |
| YOST: | | | | | | | | | | | | | |
| Daily average | 189 | 181 | 182 | 176 | 173 | 170 | 174 | 163 | 162 | 160 | 148 | 137 | |
| Month | 5,857 | 5,247 | 5,648 | 5,286 | 5,363 | 5,108 | 5,398 | 5,051 | 4,855 | 4,966 | 4,438 | 4,243 | 61,460 |
| DUNLAP: | | | | | | | | | | | | | |
| Daily average | 5 | 2 | 15 | 24 | 169 | 1,464 | 950 | 227 | 70 | 170 | 194 | 169 | |
| Month | 155 | 58 | 461 | 723 | 67,224 | 43,917 | 29,450 | 7,033 | 2,103 | 5,275 | 5,819 | 5,235 | 167,467 |
| Daily average | 58,760 | 62,340 | 60,767 | 57,689 | 62,602 | 61,659 | 61,166 | 60,806 | 61,949 | 61,388 | 59,843 | 55,229 | 60,504 |
| Total 1932 | 1,821,552 | 1,826,872 | 1,883,784 | 1,730,681 | 1,971,657 | 1,849,784 | 1,896,160 | 1,884,996 | 1,858,488 | 1,903,039 | 1,795,298 | 1,712,103 | 22,144,384 |
| Total 1931 | 2,698,916 | 2,362,696 | 2,230,534 | 2,211,571 | 2,059,458 | 2,000,546 | 2,009,113 | 1,996,070 | 1,953,904 | 1,991,702 | 1,877,856 | 1,949,699 | 25,342,065 |
| Total 1930 | 1,981,174 | 1,813,895 | 1,977,584 | 1,893,230 | 2,188,405 | 2,421,341 | 3,071,290 | 3,423,468 | 3,239,136 | 3,437,015 | 2,763,804 | 2,832,752 | 31,023,194 |
| Total 1929 | 1,453,427 | 1,527,677 | 2,021,412 | 2,199,207 | 2,413,599 | 2,424,277 | 2,349,745 | 2,350,867 | 2,148,828 | 2,029,702 | 1,818,328 | 1,744,091 | 24,481,160 |
| Total 1928 | 825,036 | 789,190 | 839,945 | 807,553 | 804,627 | 774,570 | 804,643 | 820,468 | 844,550 | 892,350 | 913,608 | 1,168,912 | 10,284,452 |
| Total 1927 | 1,245,673 | 1,075,312 | 1,167,584 | 1,112,760 | 1,092,233 | 1,020,180 | 1,005,732 | 985,149 | 959,850 | 923,242 | 868,290 | 878,502 | 12,331,498 |
| Total 1926 | 1,233,397 | 1,100,720 | 1,220,842 | 1,176,630 | 1,208,163 | 1,062,020 | 1,302,333 | 1,425,690 | 1,371,420 | 1,368,092 | 1,284,180 | 1,278,502 | 15,132,989 |

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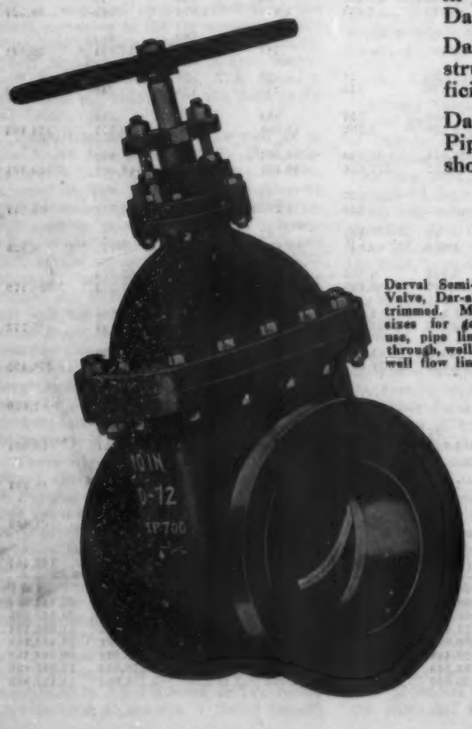

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# DARLING
## GATE VALVES

gas well. No other drilling has been done to develop the field.

### Jim Hogg County

Clark & Cowden drilled No. 1 E. Vela, 900 feet from the north line and 2,650 feet from the east line of Survey No. 588 in Jim Hogg County, 6 miles southeast of the Henne, Winch & Farias Pool, which is nearest production, and at 2,262-70 feet (though the casing dropped and shut off some of the sand) it made a 6,000,000-foot gas well. It has been shut in, and one test 4,000 feet southwest was a failure and another 600 feet east and 300 feet north showed for a gas well but was not completed as there was no market for the gas.

### Western Nueces

John F. Camp and Stanolind Oil & Gas Co. drilled No. 1 King, 600 feet from the north and west lines of Section 23 of Richard King farm lot subdivision of Nueces County, 6 miles northwest of the Agua Dulce Field, which is nearest production and at 3,899 feet got a 40,000,000-foot gas well. No. 2 King, drilled 5,000 feet southeast of it, made a gas well at 4,010-24 feet and both tests have been shut in.

In San Patricio County, 10 miles northwest of Sinton, John F. Camp drilled No. 1 W. W. Bennett in the C of SW of Section 8 of George H. Paul's Subdivision of the J. J. Welder ranch and at 4,567-94 feet made a big gas well and was shut in. It is many miles from any production.

### Starr County

The Los Olmos shallow Field, producing at around 480 feet, was discovered in 1931, but most of the development has been in 1932. The pool consists of about 50 wells and is producing about 1,000 bbls. of oil daily, the oil being shipped to the Sinclair refinery at Houston. Till late in the year the field had no pipe line outlet and development was therefore delayed. A line was built to Rio Grande City, 8 miles southeast, to a loading rack on the Missouri Pacific.

Late in March R. E. Johnson's, later carried as the Sioux City Oil Co.'s, No. 1 Goodrich, 1½ miles northeast of Rio Grande City, got a showing of oil at 1,382 feet and May 15 the well was completed. It flowed 200 bbls. in 24 hours. Tests drilled nearby and in every direction except north were dry. A string of four producers at intervals of about 350 feet were drilled to the north and all came in for around 40 to 50 bbls. on the pump.

### Saxet in Nueces County

One of the principal features of the Saxet Field in Nueces County was the discovery of two new producing sands, one at 4,550 feet and the other at 4,875 feet.

Houston Oil Co.'s No. 1-A Harrell, from sand at 4,552-60 feet, was the discovery well in that sand for 200 bbls. of oil daily with a big volume of gas. It is located 330 feet from the north and east lines of Section 28 of the Shephard farm lots. Six other wells were drilled in that part of the field by others to the same sand and all came in producers of around 150 to 250 bbls. daily, except one that came in a gasser.

Houston Oil Co. drilled No. 2-A Harrell to sand at 4,400 feet and got a well making 150 bbls. through three-sixteenths inch choke with 280 pounds pressure on the tubing, the first producer in that sand.

Gulf Coast Oil Co.'s No. 2 Bliss came in a 200-bbl. well from sand at 4,769 feet with 1,100 pounds on the tubing, the only well thus far completed in that sand.

Hillegeist and others completed No. 1 McGregor at 4,875 feet for 300 bbls. of oil daily initially, the discovery well in that sand. This gives the Saxet Field a total of four new sands discovered last year to be productive.

# Canada's Crude Production Declined in 1932 Because of Lack of New Wells in West

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

While complete official figures of the Canadian petroleum production for 1932 are not available, careful estimates place the total for all fields for the year just closed at 1,077,795 bbls. This compared with a production of 1,554,600 bbls. in 1931, represents a drop of close to 37 per cent.

The decline was largely in the Alberta fields, the old shallow pools in Ontario showing some increase over the previous year.

Comparative figures for the various Canadian provinces for 1932 and 1931 are as follows, the concluding months of 1932 being estimated:

| | 1932 | 1931 |
|---|---|---|
| New Brunswick | 5,618 | 6,600 |
| Ontario | 130,156 | 123,000 |
| Alberta | 942,021 | 1,426,000 |
| Total | 1,077,795 | 1,554,600 |

Complete figures of Canadian natural gas production for the year 1932 are not yet available, but official figures for the various months up to October compare as follows with the revised figures for 1931. The totals are given in thousands of cubic feet.

| | 1932 | 1931 |
|---|---|---|
| January | 2,220,087 | 3,113,338 |
| February | 3,043,967 | 2,895,369 |
| March | 2,009,764 | 2,675,136 |
| April | 2,353,619 | 2,386,879 |
| May | 1,760,161 | 1,983,262 |
| June | 1,130,787 | 1,504,916 |
| July | 981,700 | 1,414,696 |
| August | 911,982 | 1,261,510 |
| September | 1,157,682 | 1,512,228 |
| October | 1,712,111 | 1,845,567 |
| November | ..... | 2,465,423 |
| December | ..... | 2,816,399 |
| Total | ..... | 25,674,723 |

For the 10 months ending October 31 the 1932 production of 19,281,860,000 feet, compared with 20,592,901,000 feet in the corresponding period of 1931.

### Turner Valley Field

In petroleum production the Turner Valley Field in Alberta continued the major factor; and the marked decline of that field was likewise the outstanding contributory to the general decline.

The comparative figures of Turner Valley pipe line runs for the various months of 1931 and 1932 show the trend of the field:

| Month— | 1931 (bbls.) | 1932 (bbls.) |
|---|---|---|
| January | 156,658 | 68,893 |
| February | 132,267 | 67,789 |
| March | 128,975 | 71,533 |
| April | 114,217 | 65,691 |
| May | 118,614 | 65,709 |
| June | 113,429 | 64,324 |
| July | 96,258 | 57,141 |
| August | 66,794 | 55,027 |
| September | 66,496 | 45,869 |
| October | 66,523 | 46,409 |
| November | 69,082 | 46,710 |
| December | 73,023 | 53,748 |
| Total | 1,199,334 | 708,843 |

The actual production of the field, however, is considerably larger than the pipe line runs, these being supplemented by sales to consumers direct at the wells. The difference is indicated in the Alberta Government figures for the various pools of the province. Comparative figures for 1931 and 1932, with figures for December, 1932, unrevised, are as follows:

| Field— | 1931 | 1932 |
|---|---|---|
| Turner Valley naphtha.. | 1,345,689 | 878,612 |
| Turner Valley light crude | 26,926 | 21,564 |
| Red Coulee light crude.. | 65,066 | 34,956 |
| Ribstone heavy crude ... | 10,362 | ..... |
| Wainwright heavy crude | 7,142 | 6,889 |
| Total | 1,455,195 | 942,021 |

In the 1932 official returns the Ribstone-Wainwright production is lumped; but practically all of it came from the original Wainwright area, the Ribstone Field going off production early in the year.

The Turner Valley gas conservation board carried on exhaustive flow and pressure tests in that field. Gas quotas were from time to time set for the various producing wells, with the aggregate gas production of the field restricted to approximately 200,000,000 feet a day; representing somewhat less than 50 per cent of the previous open flow. On the basis of the information secured, the conservation board estimates the gas reserve of the field at 599,929,248,000 feet. The probable life of the field on the present basis is placed at between 9 and 12 years.

Early in 1933 the board will endeavor in conference with the operators to work out some sort of pooling agreement, under which the various producing companies will share equitably in the revenue from both gas and naphtha sales.

The right of the government and the board to restrict production was challenged in the court by Spooner Oils, Ltd., one of the operating companies. So far, both the trial court and the appellate division of the Alberta Supreme Court have upheld the validity of the legislation on all major points; but a further appeal will probably be taken.

### Turner Valley Drilling

Late in 1931 the Alberta government issued an order prohibiting the drilling of any new tests in the Turner Valley into the Madison limestone. As a result of this order, deep drilling operations in 1932 were limited to tests previously started. Several wells which had been shut down before reaching the lime were taken over by other interests with a view to drilling to that horizon.

Probably the most interesting venture of the year in Alberta was McLeod Oil Co.'s No. 4 deep test in LSD 16, Section 1-20-3w5. Drilled to an ultimate depth of 7,555 feet, establishing a new depth record for Canada, this well passed out of the lime into the underlying horizons, securing several small oil shows. Definite production tests of these were, however, deferred till milder weather.

A test that may have important results in the future development of the field was New McDougall-Segur Oil Co.'s No. 5, LSD 14, Section 12-20-3w5. This was started with the McDougall-Segur shallow sand as a definite objective. Drilled with a small hole, at a comparatively low cost, it got 60 bbls. initial production of light crude, later settling to about 25 bbls. It is claimed that, drilled with about one-tenth the outlay involved in a deep lime test, wells of this type will pay out satisfactorily; and the outcome may be further testing of the shallow light crude horizons, which were previously neglected in the search for crude naphtha.

### Border Areas

Probably the most interesting activities outside Turner Valley were those in the border area near Lethbridge.

Texas-Imperial's No. 1, LSD 14, Section 22-8-22w4, just west of Lethbridge, was tested in the Madison and abandoned. Northwest of this location, Hudson's Bay Oil & Gas Co.'s No. 1 Keho Lake, LSD 2, Section 17-11-22w4, failed to get commercial production in the Madison horizon, but is testing two promising stray sands in the overlying Benton formation. Southeast of Lethbridge, Parco Oil Co.'s No. 1, LSD 16, Section 34-1-20w4, on the Twin River structure got better showings in the Madison and is reported flowing by heads about 2½ bbls. a day. As a result, Nordon Corp. and C. A. Roney late in the year started a new test a little north of No. 1 Twin River. Deep tests previously drilled in the same general area indicate that small oil shows are quite common in the top of the Madison.

The Red Coulee Field has seen several tests more or less active, of which one. Vanalta Oils' No. 5, LSD 4, Section 4-1-16w4, was finished as a 30-bbl. producer in the Vanalta sand. Three other tests have been intermittently active but remain unfinished.

On the other hand, Mayland Syndicate's No. 1, LSD 13, Section 4-1-9w4, on the Alberta end of the Reserve Dome, which a year ago looked like a promising gas prospect, was abandoned after failing to get crude oil production in the lower sands.

### East Central Alberta

The most important producers in East Central Alberta were three gassers drilled by Northwestern Utilities, Ltd., east of Edmonton. Northwestern's No. 24, NE Section 32-48-12w4, in the Viking Field, finished with 11,000,000 feet open flow from the Viking sand. The same company drilled two tests in the Kinsella Field. No. 1 Harvey, LSD 1, Section 17-47-11w4, finished good for 7,600,000 feet; and No. 2 Harvey, SW Section 25-47-11w4, showed 19,000,000 feet open flow, the producing sand being around 2,177 feet. These were the largest wells yet drilled by Northwestern Utilities, Ltd., in the Viking-Kinsella area.

Farther north, an important wildcat was Frontier Development's No. 1, LSD 2, Section 1-55-13w4, on the Twin Hills structure east of Edmonton. This was a test of an oil horizon indicated a couple of years ago in Alberta Pacific Consolidated's No. 1 Duvernay wildcat. Late in December, Frontier's No. 1 got a good looking sand at 1,887 feet, which is waiting to be tested.

In Manitoba, Commonwealth Petroleum's No. 2, LSD 2, Section 26-2-9wPM, near Manitou, drilled an acreage of the Pembina Valley Gas Corp. finished a dry hole at 2,634 feet.

### Quebec Operations

In eastern Canada, the St. Lawrence Valley of Quebec has been the scene of considerable drilling. Operations, commenced in 1931, were actively pushed with, however, little if any success.

South of the St. Lawrence, Richelieu Gas Co.'s No. 2 at St. Denis, county of St. Hyacinthe, was abandoned after an unsuccessful shot at 4,107 feet. Canadian Seaboard Oil & Gas Co.'s No. 1, St. Gerard, Yamaska County, finished dry at 6,100 feet. South Shore Oil Lands' No. 1, St. Perpetue, Nicolet County, was abandoned at 3,200 feet owing to caving; No. 2, in the same locality, finished dry at 4,400 feet, after which the company discontinued active operations. It is understood the Canadian Seaboard company and Alberta Gas & Fuel Co. will drill a joint test on the south shore.

### Ontario Operations

A surprising feature of Ontario drilling operations was the development of what looked like commercial oil production in two new areas, both of which were regarded as gas fields.

The first of these was in the west end of the Dawn gas field, Lambton County. Union Gas Co.'s No. 61, Lot 23, Concession 2, Dawn Township, got a shot production, estimated 25 bbls. from a sand below 1,815 feet. Of three subsequent tests, two got oil, one being much larger than the first producer, and another finished dry, while a fifth well is drilling. So far, the oil producers are fairly close and no extensive field is indicated. Of two tests drilled farther west, Dawn Oil & Gas Co.'s No. 1 in Sombra Township finished dry and Black Bear Syndicate's No. 1 near Wilkesport is shut down.

# Year of Turmoil in World's Largest Oil Field in Effort to Keep Down the Flood of Crude

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

The East Texas Field, made up of 114,000 proven acres, located in parts of five counties and divided into three districts, Joiner, Kilgore and Longview, had produced 229,701,433 bbls., of record, up to the close of December, 1932. How much more oil was produced in the field no one may ever be able to say, as it is believed millions of barrels were produced, of which there was no record made and most of which was sold below market prices. In 1930 the Joiner Pool produced 29,122 bbls. The pool was opened late in the year. In 1931 the Kilgore and Longview districts were added and the three districts were credited with a production of 107,727,912 bbls. In 1932 the whole field produced 121,944,309 bbls. Only 11 fields in the United States ranging from 10 to 57 years in age have produced more oil than East Texas has in two years. While it is believed it will eventually surpass the record of every field in the country, it has yet to pass on its way upward Salt Creek, Eldorado-Augusta, Santa Fe Springs, Kern River, Bradford, Smackover, Cushing, Coalinga, Long Beach, Seminole and Midway Sunset, the last named being the largest producer of oil, by far, ever developed in the United States.

In 1932 the Longview district was first in crude production with 45,725,947 bbls.; Kilgore produced 39,086,616 bbls. and Joiner 37,131,836 bbls. The figures given do not include the unknown quantity of outlaw oil produced and marketed from the three districts.

### A Hectic Year

No field has ever had such a hectic career in one year's time as the East Texas Field in 1932. There were troubles and problems enough for all interested in the field, chief of which were proration worries, injunctions against the railroad commission, and injunctions of the commission against violators running rife throughout the period.

A Federal Court order was issued by three judges upholding proration in East Texas, but condemning the per-well method of proration, and Chief Justice Hughes condemned the calling out of troops to handle the situation, this having been done by Governor Sterling in August, 1931, but the case coming before the U. S. Supreme Court the latter part of 1932.

At the close of the year there was only one permanent Federal injunction restraining the commission, and this was obtained by an operator who is producing four shallow "seepage" oil wells in Gregg County. There are, however, other Federal injunctions possibly staring the commission in the face, several operators and companies having asked for such injunctions under the last proration order, but the Federal judge from whom they were sought has not yet issued an order. They may not be granted.

### Nineteen Orders Issued

Nineteen orders were issued by the commission changing the per-well allowable during the year. The only time it was raised was September 1 when, with over 7,250 wells on production, it was increased from the past two-week period of 43 bbls. per well per day, up to 50 bbls. On September 16 it was again cut back, to 46 bbls.

On December 11 the field was put on a new method of proration, on a two-thirds well and one-third acreage and bottom hole pressure method. The maximum per-well allowable is now 31 bbls. This order, however, did not go into effect until January 1.

In midsummer, 1931, the field was shut down by National Guard troops under Governor Sterling's directions; in December, 1932, it was shut in for 14½ days under railroad commission orders. This was said to be done to allow commission engineers to take bottom hole pressure gauges on some 300 key wells for information to be used under the new plan of proration.

### Per-Well Allowables

From December 11, 1931, to February 5, 1932, the per-well per day allowable was 100 bbls. per day. The following is a schedule of changes made in the per-well allowable in 1932:

| | Allowable (bbls.) | No. of wells |
|---|---|---|
| February 5 | 75 | 4,015 |
| March 16 | 72 | 4,563 |
| April 1 | 71 | 4,714 |
| April 16 | 67 | 4,957 |
| May 1 | 61 | 5,250 |
| May 16 | 59 | 5,500 |
| June 1 | 54 | 5,800 |
| June 16 | 51 | 6,344 |
| July 1 | 50 | 6,500 |
| July 19 | 46 | 6,800 |
| August 1 | 44 | 7,125 |
| August 16 | 43 | 7,420 |
| September 1 | 50 | 7,643 |
| September 16 | 46 | 8,000 |
| October 1 | 44 | 8,208 |
| October 16 | 40 | 8,400 |
| November 1 | (*) | 8,602 |
| December 1 | 37 | 9,018 |
| December 17—Shut in to Jan. 1 | | 9,300 |

*No new order issued in November on per-well allowable.

December 11 the new two-thirds per-well and one-third potential and acreage basis system put into use, no well to be allowed over 33 bbls. per day.

As the per-well allowable was cut in the field, it brought the daily field allowable down from 400,000 bbls. to 290,000 bbls. per day, the latter figure being ordered during the last meeting of the commission in December, 1932, and to go into effect January 1, 1933.

The daily allowable was cut to meet a lessening demand for crude during the fall and winter months, purchasing companies not wanting to take on any more well connections, and some of the companies desirous of cutting loose from many they already had.

The opening of Conroe, in the Gulf Coast division of Texas, and increasing production in that field, which is located nearer tidewater than the East Texas Field, also cut into the demand for East Texas crude, consequently as the field allowable was cut back to meet smaller demand for crude, the per-well allowable had to be cut back each week due to more than 100 wells being completed each seven-day period.

The price of crude jumped to 98 cents per barrel on April 1, and on October 15 the Sun Oil Co. led with a posting of $1.10 per barrel. All major purchasers with the exception of the Humble Oil & Refining Co. and Stanolind Crude Oil Purchasing Co., Tidal Refining Co., Mid-Kansas Oil & Gas Co. and a couple of smaller purchasers met this price. On December 14 The Texas Company led with a cut to 75 cents per barrel. Some of the companies fell back to the old price of 98 cents per barrel, held at that price a short time, but then, for protection, had to reach the level of the other purchasers' price.

While other companies were following the commission's orders, and running the full daily allowable from the wells, the Humble Oil & Refining Co. took an arbitrary stand and cut its purchases to 50 per cent of the allowable on September 12. Later the percentage was raised to 60 per cent of the allowable, the other 40 per cent going to storage for which it charged 2 cents per barrel per month, also charging 10 cents per barrel gathering charges. January 1, 1933, it again raised its takings to 75 per cent of the allowable.

During the fore part of the year "bypassing" was indulged in by several operators in an effort to produce, run and sell more of their oil than allowed by the commission. Many indictments were found against alleged thieves and "bypassers" but only two convictions have been made, all other indictments having been quashed.

Trucks were used for some time to haul oil from wells to local refineries, loading racks and other outlets, many of the trucks hauling oil which was stolen at night. This method of transporting oil was finally practically eliminated by the commission, but not until it had gained a great enough status to be called a "racket."

Many small refineries were erected throughout the field during the year, "distress oil" being sold below the market price to these plants, thereby making the construction and operation of such plants profitable. Eleven plants were built in the field during the 12-month period. The average size of these plants was 250 bbls. per day crude throughput. Gathering systems connected many of them with wells, but in several instances oil had to be hauled to them by truck, and the manufactured gasoline hauled from them in the same manner, the plants having no pipe line or loading rack outlets.

### Slow in Obeying Orders

May 10 the railroad commission ordered meters installed on all outgoing pipe lines, gathering lines to loading racks, and on lines leading to local refineries, but little attention was paid to the order, some companies taking their time in installing the meters, if they ever did. The meters were to be used in checking production and pipe line runs.

There are now 29 completed refineries in the field, 12 of these having been erected during the last half of 1932 with two others proposed. Nine gasoline plants were erected during the year, with one other proposed for Gregg County. If the price of oil remains at 75 cents or below that level, and proration holds in the field, it is quite probable that refinery construction will be checked, the local plants not being able to get excess oil at prices below the market, therefore little construction is expected in the field in 1933.

### Troops Sent Home

The last contingent of National Guard troops, sent in August 17 by Governor Sterling, broke camp and returned to their respective homes on December 21, 1932. When martial law was declared in the field, shutting down all producing wells, around 1,200 men were called out. That number was gradually decreased during the year, until during the last few months there were only 40 men and officers in the field. These men aided the commission in enforcing its proration orders, and accomplished admirable results.

Sixteen major pipe lines carry oil from the district, some of these connecting with other major carriers outside of the field. Thirty-three small gathering systems serve to pick up the oil in the field, either connecting with major carriers, refineries or loading racks in the district. There are 41 loading racks located on various railroads in or near the field.

There were 5,904 tests completed in the entire district during the year, 193 of which were abandoned, the majority of these having been wildcat tests while the producing wells were in the field proper. Nine gas wells were also completed in the field, which are included in the completion report. The total number of oil producers completed in the field was 5,702. Completions increased during the months of January, February, March, April, May, June and July, reaching a peak of 744 producers completed in the latter month, with two gas wells completed in the south end of the field in that period.

There were 52 wildcat and field tests abandoned during March and April, the two heaviest months of wildcatting, while the field abandonments were on the edge of the structure.

**EAST CENTRAL TEXAS AND EAST TEXAS**
**Summary of Completed Wells in 1932**
**By Counties**

| County— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| Anderson | 2 | 0 | 2 | 0 |
| Angelina | 1 | 0 | 1 | 0 |
| Bowie | 5 | 0 | 5 | 0 |
| Camp | 1 | 0 | 1 | 0 |
| Cherokee | 28 | 1,049 | 12 | 0 |
| Dallas | 3 | 0 | 3 | 0 |
| Delta | 3 | 0 | 3 | 0 |
| Ellis | 3 | 0 | 3 | 0 |
| Fannin | 2 | 0 | 2 | 0 |
| Freestone | 1 | 0 | 1 | 0 |
| Gregg | 3,162 | 218,959 | 33 | 9 |
| Henderson | 3 | 0 | 3 | 0 |
| Hill | 1 | 0 | 1 | 0 |
| Hopkins | 2 | 0 | 2 | 0 |
| Hunt | 2 | 0 | 2 | 0 |
| Jasper | 1 | 0 | 1 | 0 |
| Kaufman | 4 | 0 | 4 | 0 |
| Lamar | 4 | 0 | 4 | 0 |
| Leon | 2 | 0 | 2 | 0 |
| Morris | 1 | 0 | 1 | 0 |
| Nacogdoches | 8 | 0 | 8 | 0 |
| Polk | 2 | 0 | 2 | 0 |
| Rains | 4 | 0 | 4 | 0 |
| Red River | 6 | 0 | 6 | 0 |
| Rusk | 1,855 | 132,564 | 39 | 0 |
| San Augustine | 1 | 0 | 1 | 0 |
| Smith | 318 | 22,328 | 12 | 0 |
| Titus | 1 | 0 | 1 | 0 |
| Upshur | 397 | 24,210 | 17 | 0 |
| Van Zandt | 80 | 8,272 | 16 | 2 |
| Wood | 1 | 0 | 1 | 0 |
| Total | 5,904 | 397,372 | 193 | 9 |

**Summary by Months**

| Month— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| January | 238 | 36,554 | 11 | 0 |
| February | 343 | 29,037 | 14 | 3 |
| March | 404 | 29,072 | 25 | 1 |
| April | 499 | 34,074 | 27 | 1 |
| May | 601 | 44,192 | 14 | 1 |
| June | 638 | 39,008 | 10 | 0 |
| July | 744 | 44,052 | 15 | 2 |
| August | 694 | 43,430 | 18 | 0 |
| September | 437 | 26,820 | 14 | 1 |
| October | 406 | 23,988 | 13 | 0 |
| November | 428 | 24,560 | 12 | 0 |
| December | 372 | 22,585 | 20 | 0 |
| Total 1932 | 5,904 | 397,372 | 193 | 9 |
| Toatl 1931 | 3,580 | 2,450,697 | 210 | 7 |
| Difference | 2,324 | 2,053,325 | 17 | 2 |

Note: Owing to the fact that since midsummer, 1931, when the East Texas Field was shut in, and thereafter put on a strict curtailed production program, it was impossible to give initial production of wells because most of them were gauged only an hour or a fraction of an hour on their first day. The figures given represent only the volume of oil produced for periods ranging from a few minutes upward through chokes of various sizes. The larger figure given for 1931 was occasioned by the fact that 24-hour initial production figures were available in the first half of the year.

There are 89 wells in the Kilgore area which have made or are now making various quantities of salt water, practically all of these being located on the west or northwest side of the field, but a few showing up on the east side where the water has migrated from the west.

There were 160 pumping wells in the

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field on November 12, when the last pumping report was made up; 113 of these were in the Joiner area, on the east side. There were also 11 dead wells in that area. Thirty-six of the pumpers are in the Kilgore sector, while 11 dead wells are also located in that area. Only 11 wells are pumping in the Longview area, while three are standing dead. Sixty-one of this entire number of pumpers never did flow but had to be put on the pump as soon as completed. A few companies rigged up pumping equipment on many of the leases, not on account of present necessity, but merely preparing for the future. The Magnolia Petroleum Co. has standardized the majority of its wells, although only a few require this.

### Important Purchases

There were several large purchases made in the field during the past year. The Tidal Oil Co. purchased a total of seven tracts, comprising 257 acres, including 28 oil wells from the Republic Production Co., thereby adding to its producing properties and increasing them to over 4,000 acres. This was one of the major purchases made in the 12-month period.

The Texas Seaboard Oil Co. purchased a quarter interest from Cranfill & Reynolds, Inc., under 1,029 acres held by that company and the Atlantic Oil Producing Co., the latter holding the remainder of the interest. There were 38 oil wells on the leases when the trade was made, during the fore part of August, 1932.

The Simms Oil Co. purchased 800 acres in the north end of the Gregg and in the Upshur producing area during the fore part of the year. Stanolind Oil & Gas Co. purchased a half interest in the Pure Oil Co.'s Graham Lake block in the south end of the field, much of which proved to be in the gas area; the American Liberty Oil Co. became interested in 1,500 acres of leases and 50 producing wells in Rusk and Gregg Counties when they acquired them from Golding & Murchison of Dallas. The latter two men are officials in the Liberty company. Gant, Knox & Garvin made a deal with the Kirby Oil Co., Moody-Seagraves and Adams & Lyles involving around 800 acres in Rusk County. The majority of these deals were made with part cash and the remainder out of part of the oil produced.

### Over 114,000 Proven Acres

There are now over 114,000 proven acres in the field. Cranfield & Reynolds' No. 1 Rash, in the Eubanks Survey, extended production 3½ miles to the north in Upshur County during the fore part of the year, thereby opening several hundred more acres to production. Merry Brothers and Perini's No. 1 Kelly, in the M. De Los Santos Coy Survey, extended production over into Cherokee County, opening up the fifth county to production and extending the field to include several hundred more acres.

### Surprise Gas Well

Peyton Brothers opened a big surprise in the field in January, 1932, when their No. 1 Perry in the L. N. Sparks Survey, southern Rusk County, came in as a 60,000,000-foot dry gas well. Sand was topped at 3,687 feet. Total depth is 3,718 feet. This was the first dry gasser in the field, and opened a gas area comprising around 5,000 acres. However, since completion of that well, five other dry gassers were drilled in the area, but have started producing oil with the gas, the oil coming in as the pressure dissipated in the gassers. Salt water also began to encroach from the west side as the gas pressure decreased, salt water migrating from the west side of this area to wells on the extreme east.

### Gasoline to Pacific Coast

In August, 1932, the first gasoline was shipped from East Texas to the western seaboard, the East Texas Refining Co. making the shipment to Portland and Seattle. All other oil had been going to Gulf Coast refineries, Canadian refineries, Atlantic Coast refineries and foreign seaports, or shipped north and east through vast systems of trunk lines to refineries in that part of the country.

The East Texas Pipe Line Committee, made up of representatives of purchasing companies in the field, for the purpose of discussing connections for wells as they were completed each month, had its hands full during the entire year due to approximately 400 wells being completed each month, with many of the purchasing companies not desirous of more connections, especially during the latter part of the year. To allow these wells to go unconnected meant the possibility of distress oil being thrown on the market below the market prices, thereby weakening the price structure and hurting conditions in the field and the entire industry, therefore the committee did its best, although handicapped by companies which declared they were always overloaded, or had more oil than they wanted.

### Fighting Oil Thieves

Due to oil being "by-passed," overproduced and stolen in various ways, the state legislature took a hand during the latter part of the year, passing a bill defining oil and gas theft and levying penalty for such law infractions. Soon after this an antitheft bureau was picked by the railroad commission and put in the field for the purpose of stopping such theft of oil, much of which was being hauled out by trucks in the night.

Judge Amos L. Beatty, then president of the American Petroleum Institute appointed a committee to make an investigation of reports that major purchasing companies were also guilty of overproduction violations. So far this committee has not completed its work, or its reports have not been published if completed. It was the consensus of opinion that one major purchasing company was guilty of violations, and due to such reports and rumors being spread around the field and state the investigating committee was picked to make such an investigation.

Attacks, through the courts, are expected to be made soon on the new proration orders and method of proration, and it looks as if the year 1933 might also be troublesome in the field, although public opinion in East Texas seems to be overwhelmingly against breaking down proration.

Drilling decreased rapidly during the past few weeks, and from now on drilling reports will not show an average of 100 locations being staked every week and 100 wells completed as was done during nine months in 1932.

Pressures have fallen but slowly during the year, water encroachment has been negligible, and the field looks destined to flow for years if curtailed to as low a figure as at present, 290,000 bbls. per day.

The year 1933 is expected to be quiet in so far as construction, pipe lining and drilling activity are concerned, but after such a year as 1932 has been shoved into the background, anything would seem quiet and tame for this vast field which has held the entire industry "at bay" for the past two years.

### Gasoline Plants

Gasoline plants erected in the field during the year are as follows:

Harmony Natural Gasoline Corp. (formerly Arkansas Gas & Fuel Co.), 5,000,000-foot plant, Longview area, Gregg County.

Humble Oil & Refining Co., 5,000,000 feet, Kilgore area, Gregg County.

Humble Oil & Refining Co., 10,000,000 feet, London area, Rusk County.

Gulf Production Co., 5,000,000 feet, London area, Rusk County.

Excelsior Natural Gasoline Co., 3,000,000 feet, London area, Rusk County.

Lisbon Gasoline Co., 3,000,000 feet, South Rusk County.

East Texas Gasoline Co., small plant, not used, Gregg County.

Crook Gasoline Co., 2,000,000 feet, Longview area, Gregg County.

Gladewater Gasoline Co., 4,000,000 feet, Gladewater, Gregg County.

## East Central Texas

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BOGGY CREEK: | | | | | | | | | | | | | |
| Daily average | 1,096 | 810 | 997 | 911 | 994 | 1,275 | 1,067 | 1,035 | 1,084 | 1,145 | 1,084 | 1,039 | |
| Month | 33,978 | 23,496 | 30,902 | 27,329 | 30,818 | 38,245 | 33,071 | 32,174 | 32,526 | 35,490 | 32,524 | 32,211 | 382,764 |
| CURRIE: | | | | | | | | | | | | | |
| Daily average | | | | | | 185 | 162 | | | | | 146 | |
| Month | | | | | | 5,540 | 5,025 | | | | | 4,527 | 15,092 |
| POWELL: | | | | | | | | | | | | | |
| Daily average | 2,388 | 2,794 | 2,237 | 2,568 | 3,601 | 2,504 | 2,658 | 2,782 | 2,830 | 2,675 | 2,536 | 2,784 | |
| Month | 74,035 | 81,022 | 69,349 | 77,046 | 80,629 | 75,115 | 82,393 | 86,248 | 84,908 | 82,950 | 76,078 | 86,308 | 956,071 |
| MEXIA: | | | | | | | | | | | | | |
| Daily average | 2,725 | 2,461 | 2,667 | 2,514 | 2,727 | 2,760 | 2,752 | 2,621 | 2,565 | 2,562 | 2,796 | 2,540 | |
| Month | 84,479 | 71,362 | 82,675 | 75,425 | 84,539 | 82,799 | 85,318 | 81,566 | 76,953 | 79,428 | 83,883 | 78,735 | 967,163 |
| RICHLAND: | | | | | | | | | | | | | |
| Daily average | 49 | 36 | 36 | 26 | 24 | 36 | 33 | 32 | 33 | 32 | 32 | 32 | |
| Month | 1,340 | 1,041 | 1,114 | 774 | 747 | 1,076 | 1,020 | 990 | 980 | 994 | 954 | 993 | 11,923 |
| SATIN: | | | | | | | | | | | | | |
| Daily average | | | | 26 | 26 | 22 | 97 | 47 | 11 | 18 | 28 | 30 | |
| Month | | | | 783 | 805 | 659 | 3,009 | 1,453 | 325 | 550 | 846 | 922 | 9,353 |
| VAN: | | | | | | | | | | | | | |
| Daily average | 41,903 | 46,668 | 48,913 | 49,281 | 50,455 | 53,655 | 50,500 | 49,813 | 47,693 | 44,425 | 42,356 | 42,610 | |
| Month | 1,298,998 | 1,353,375 | 1,516,304 | 1,478,437 | 1,564,112 | 1,609,662 | 1,565,509 | 1,544,213 | 1,430,797 | 1,377,170 | 1,270,688 | 1,321,915 | 17,361,174 |
| WORTHAM: | | | | | | | | | | | | | |
| Daily average | 84 | 166 | 147 | 132 | 135 | 134 | 149 | 142 | 143 | 135 | 137 | 132 | |
| Month | 2,607 | 4,810 | 4,558 | 3,951 | 4,181 | 4,017 | 4,614 | 4,404 | 4,264 | 4,187 | 4,105 | 4,089 | 49,787 |
| Daily average | 48,236 | 52,925 | 54,997 | 55,458 | 58,962 | 60,571 | 57,419 | 56,435 | 54,355 | 50,993 | 48,969 | 50,313 | 52,970 |
| Total 1932 | 1,495,327 | 1,535,106 | 1,704,902 | 1,662,745 | 1,765,831 | 1,817,113 | 1,779,953 | 1,751,045 | 1,630,753 | 1,580,789 | 1,469,078 | 1,559,703 | 19,752,328 |
| Total 1931 | 1,249,783 | 1,185,856 | 1,455,154 | 1,509,950 | 1,689,453 | 1,787,686 | 1,687,421 | 1,692,488 | 1,730,323 | 1,734,887 | 1,770,544 | 1,671,358 | 19,164,903 |

## East Texas

### Daily Average and Monthly Production of Crude Oil in 1932

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LONGVIEW: | | | | | | | | | | | | | |
| Daily average | 114,520 | 110,223 | 119,576 | 133,446 | 133,471 | 125,015 | 127,408 | 125,183 | 143,865 | 138,715 | 135,798 | 92,281 | |
| Month | 3,550,133 | 3,196,462 | 3,706,861 | 4,003,370 | 4,137,591 | 3,750,457 | 3,949,642 | 3,880,670 | 4,315,957 | 4,300,160 | 4,073,942 | 2,860,712 | 45,725,947 |
| KILGORE: | | | | | | | | | | | | | |
| Daily average | 111,192 | 102,728 | 107,348 | 117,437 | 109,302 | 102,667 | 103,916 | 104,203 | 118,572 | 113,500 | 112,603 | 78,576 | |
| Month | 3,446,952 | 2,979,122 | 3,327,784 | 3,523,115 | 3,388,363 | 3,079,998 | 3,221,390 | 3,230,291 | 3,557,164 | 3,518,508 | 3,378,085 | 2,435,854 | 39,086,616 |
| JOINER: | | | | | | | | | | | | | |
| Daily average | 105,165 | 97,004 | 100,230 | 104,444 | 103,625 | 105,559 | 101,950 | 99,637 | 110,664 | 110,222 | 107,015 | 73,220 | |
| Month | 3,260,118 | 2,813,119 | 3,107,127 | 3,133,316 | 3,213,369 | 3,166,783 | 3,160,458 | 3,089,357 | 3,319,910 | 3,416,886 | 3,210,456 | 2,272,937 | 37,131,936 |
| Daily average | 330,877 | 309,955 | 327,154 | 355,327 | 346,398 | 333,241 | 333,274 | 329,043 | 373,101 | 362,437 | 355,416 | 244,177 | 305,853 |
| Total 1932 | 10,257,192 | 8,988,703 | 10,141,772 | 10,659,801 | 10,707,323 | 9,997,238 | 10,331,490 | 10,200,318 | 11,193,031 | 11,235,554 | 10,662,484 | 7,569,493 | 121,944,399 |
| Total 1931 | 110,515 | 701,739 | 2,900,925 | 7,479,756 | 9,658,710 | 10,680,539 | 14,157,981 | 16,813,815 | 11,156,105 | 12,690,978 | 11,716,113 | 9,660,736 | 107,727,912 |
| TOTAL EAST CENTRAL AND EAST TEXAS: | | | | | | | | | | | | | |
| Total 1932 | 11,752,519 | 10,523,809 | 11,846,674 | 12,323,546 | 12,473,154 | 11,814,351 | 12,111,443 | 11,951,366 | 12,823,774 | 12,816,323 | 12,131,563 | 9,129,196 | 141,697,727 |
| Total 1931 | 1,360,297 | 1,887,595 | 4,356,079 | 8,989,706 | 11,348,163 | 12,468,225 | 15,845,402 | 18,506,303 | 12,886,428 | 14,425,865 | 13,486,657 | 11,332,094 | 126,892,814 |
| Total 1930 | 669,523 | 678,455 | 813,799 | 1,030,567 | 1,194,501 | 1,229,886 | 1,259,256 | 1,246,657 | 1,228,947 | 1,320,710 | 1,257,992 | 1,266,110 | 13,196,403 |
| Total 1929 | 675,021 | 579,471 | 686,569 | 605,389 | 608,505 | 577,320 | 600,581 | 582,362 | 549,000 | 580,595 | 536,912 | 651,062 | 7,213,557 |
| Total 1928 | 797,384 | 737,284 | 780,967 | 727,455 | 726,132 | 706,269 | 713,628 | 723,016 | 711,450 | 709,120 | 657,810 | 705,002 | 8,695,507 |
| Total 1927 | 1,479,568 | 398,208 | 1,442,554 | 1,264,690 | 1,066,028 | 1,032,720 | 1,002,230 | 960,659 | 873,720 | 929,845 | 856,470 | 865,334 | 13,162,026 |
| Total 1926 | 1,928,851 | 1,759,548 | 1,822,614 | 1,763,970 | 1,703,853 | 1,557,780 | 1,662,437 | 2,198,365 | 1,865,970 | 1,731,598 | 1,558,890 | 1,734,047 | 21,287,923 |

# North Louisiana Activity Increased During 1932; Open Pool in Miller County, Arkansas

By D. H. BANCROFT

It remained for the last two months of the year to develop the two things of greatest significance that occurred in Arkansas, Louisiana and Mississippi during 1932. These were the completion of the first really commercial well in the prospective new pool in Miller County, Arkansas, 15 miles east of Texarkana, and successful experiments with acid treatment applied to Zwolle chalk rock wells and, to a more limited extent, to wells in the chalk rock horizon of old pools in Caddo Parish. With respect to the latter, experiments are just beginning to get under way, only two wells having been treated so far, but both responding with increased production.

Wildcatting was carried on on an increased scale throughout the entire territory, more so in North Louisiana than elsewhere, and resulted in three prospective pools: Spring Ridge, five miles north of Pleasant Hill in north Sabine Parish, Louisiana, the Converse area of west central Sabine Parish and the Miller County, Arkansas, prospect.

### Deep Drilling Fruitless

Deep drilling was indulged in to a considerable extent but failed to develop any new production, either gas or oil, in either of the three states. This character of work also will be carried on on a comparatively large scale during 1933 unless all signs fail, for North Louisiana has been so thoroughly punctured with tests down to 3,500 feet during the last 10 or 15 years that it would seem scarcely anything remains but to drill deeper. Should shallow production be developed, it will be in scattered pools of small area, and questionable volume of production and length of life.

## NORTH LOUISIANA

It was during the first week of November that Jack Whitson, drilling No. 1 Sanders, a wildcat in Section 19-11-13, DeSoto Parish, south of Mansfield, made the first experiment with the acid treatment. He had a show of oil in chalk at 1,465 feet and bailed dry and then tried the acid with no better results. Subsequent tests in Zwolle have fairly well demonstrated, however, that the oil was not there, for in every Zwolle test where there was any production whatever and the acid has been tried, the test has resulted in largely increased production. Since his experiment many Zwolle operators have tried the process with successful results and at this writing the companies using the patented process are said to have contracts booked up sufficient to keep them busy for the next 90 days, not including the results that may follow the two or three experiments tried thus far in Caddo. As a rule, application of the treatment has increased individual wells' output several hundred per cent in Zwolle and in the one well in Caddo from which results are definitely known it raised production from 5 bbls. to 75 bbls.

A DeSoto wildcat that attracted attention for a brief period but has not been followed by further success was Standard Oil Co. and Pelican Natural Gas Co.'s No. 1 Sutherlin, Section 19-12-14, completed at 3,004 feet making 12,000,000 feet of gas with 1,400 pounds rock pressure, after deepening from 2,782 feet, where the bottom was 6 feet in sand which, after cementing casing, developed 3,000,000 feet of gas. Location is approximately 5 miles south of Grand Cane and the test is the best and highest on structure of several that have been drilled within 3 to 5 miles, all of which made showings of various size, but none made a well.

In October, 1931, Langbridge Oil Co.'s No. 1 Stevens, Section 17-9-11, Sabine Parish, 3 miles south of the town of Pleasant Hill, was completed as a 30-bbl. pumper at 3,369 feet and was followed during the early part of 1932 by Frank Foster's No. 1 Stevens, Section 20-9-11, making 13,000,000 feet of gas with 1,400 pounds rock pressure at 3,358 feet. Deepened to 3,701 feet in search of oil it went into salt water and was abandoned.

The possibility of the Converse area of Sabine Parish, 12 miles north of Zwolle, becoming a new producing district, was first suggested by Gibson & Johnson's No. 1 Frost Johnson in Section 19-9-13, which, after a bad casing job, was finally completed at 1,626 feet pumping 25 to 40 bbls. of 45 gravity crude from sandy marl. Some time later, their No. 2 Frost Johnson in Section 15-9-13, 3 miles northeast, developed a good show of oil at 1,516 feet but after bailing and swabbing for several days with oil rising in the hole overnight, it failed to make a well at 1,534 feet and went deeper. At 1,901 feet acid treatment was tried but the acid was lost and the well is shut down, still a potential producer. Meantime, between 15 and 20 new operations had been started but at the end of the year those that were not shut down were not deep enough.

### Zwolle Covers Vast Area

Zwolle was by far the most active area in the territory and was extended approximately 2 miles west and east, and the new extensions carried south by wells that accounted for most of the activity in the field, now approximately 25 miles long and 12 to 15 miles wide from north to south. The west extension is southwest of Zwolle Townsite and north and east of Many. Production, as in the case of the older part of the field, opened in November, 1930, is from crevices in the chalk rock and until the advent of the acid treatment operators had about an even chance of getting a producer or a failure. Now, if they happen to hit anywhere near one of these crevices, their chances are somewhat improved.

Deep drilling in Claiborne Parish, to around 4,200 feet, resulted in three gas wells in the Sugar Creek Trinity horizon which developed 22,000,000 feet of rich gas and one wildcat failure. A similar deep test in Lincoln Parish, about 12 miles northeast, also was dry, but is to be followed, it is understood, by another test on a second block held by the same interests. The Rhodessa district of Caddo Parish, where gas was developed in 1930 at around 5,200 feet added two or three wells, the last one a 50,000,000-foot producer from the Trinity. At the end of the year H. I. Morgan was drilling in the red beds at 3,800 feet in the Bellevue district of Bossier Parish without so far having had any show worth mentioning. Bellevue is the highest structure in the entire territory and produced from around 400 feet. Numerous deep tests are scheduled to be drilled during 1933 in scattered parts of the territory.

## ARKANSAS

Aside from deep tests in Union and Ashley Counties, Miller County, in the extreme southwest part of the State, as it developed during the closing weeks of the year, was the center of interest in activities in Arkansas. Drilling in the gas areas of north Arkansas developed one well in Franklin County, but it made only 3,000,000 feet of gas upon completion. The Ashley County well was D. S. Brooks' No. 1 Crossett Lumber Co., in Section 31-15-6, which found salt water at 4,031 feet after a small show of oil in the top of the Nacatoch at 3,155 feet.

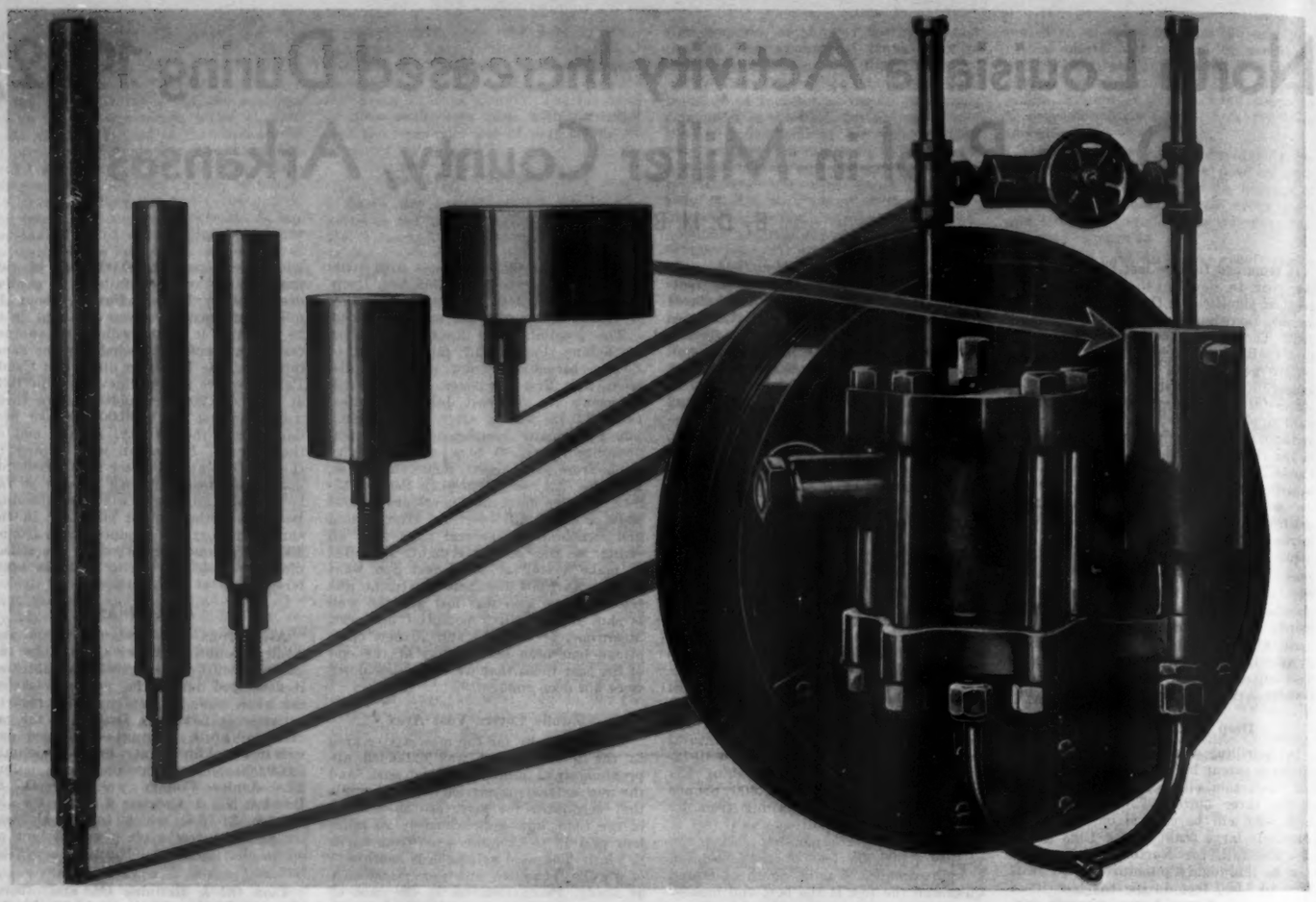
Lion Oil & Refining Co. and others' No. 9-A Hayes, Section 4-16-15, in the approximate center of the Smackover Field of Union and Ouachita Counties, is the deepest hole yet drilled in Arkansas. It went to 7,255 feet where drill stem stuck, and was junked in 1,281 feet of rock salt. Only a few small shows of dead oil were found after topping the red beds at 3,341 feet. The salt was topped at 5,974 feet.

Miller County development began three

## North Louisiana

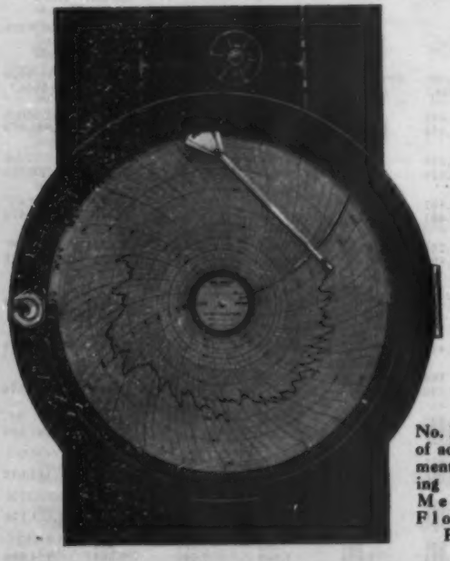
**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CADDO (light): | | | | | | | | | | | | | |
| Daily average | 5,382 | 5,313 | 5,403 | 5,485 | 5,425 | 5,242 | 5,117 | 5,065 | 5,142 | 5,166 | 5,047 | 4,873 | |
| Month | 166,842 | 154,077 | 167,648 | 164,550 | 168,175 | 157,260 | 158,627 | 157,015 | 154,260 | 160,146 | 151,410 | 151,063 | 1,911,073 |
| CADDO (heavy): | | | | | | | | | | | | | |
| Daily average | 1,618 | 1,985 | 2,001 | 2,050 | 2,094 | 2,016 | 1,939 | 1,888 | 1,898 | 1,910 | 1,912 | 1,846 | |
| Month | 50,158 | 57,565 | 62,031 | 61,500 | 64,914 | 60,480 | 60,109 | 58,528 | 56,940 | 59,210 | 57,360 | 57,226 | 706,021 |
| HOMER: | | | | | | | | | | | | | |
| Daily average | 2,845 | 2,894 | 2,875 | 2,882 | 2,914 | 2,883 | 2,887 | 2,821 | 2,810 | 2,731 | 2,628 | 3,173 | |
| Month | 88,195 | 83,926 | 89,125 | 86,490 | 90,334 | 86,490 | 89,497 | 87,451 | 84,300 | 84,661 | 78,840 | 98,362 | 1,047,672 |
| HAYNESVILLE: | | | | | | | | | | | | | |
| Daily average | 4,987 | 4,794 | 4,664 | 4,452 | 4,416 | 4,344 | 4,156 | 4,284 | 4,215 | 4,163 | 3,712 | 3,622 | |
| Month | 154,597 | 139,026 | 144,584 | 133,590 | 136,896 | 130,320 | 128,836 | 132,804 | 126,450 | 129,063 | 111,360 | 112,282 | 1,579,798 |
| DE SOTO-RED RIVER: | | | | | | | | | | | | | |
| Daily average | 2,055 | 1,977 | 2,043 | 1,995 | 1,980 | 2,007 | 1,980 | 1,932 | 1,864 | 1,858 | 1,857 | 1,813 | |
| Month | 63,705 | 57,333 | 63,333 | 59,850 | 61,380 | 60,210 | 61,380 | 59,892 | 55,920 | 57,598 | 55,710 | 56,203 | 712,514 |
| ELM GROVE: | | | | | | | | | | | | | |
| Daily average | 344 | 332 | 341 | 297 | 306 | 288 | 286 | 338 | 403 | 396 | 393 | 365 | |
| Month | 10,664 | 9,628 | 10,571 | 8,910 | 9,486 | 8,640 | 8,866 | 10,478 | 12,240 | 12,276 | 11,940 | 11,315 | 125,014 |
| COTTON VALLEY: | | | | | | | | | | | | | |
| Daily average | 503 | 501 | 565 | 536 | 529 | 846 | 853 | 766 | 711 | 707 | 704 | 662 | |
| Month | 15,593 | 14,529 | 17,515 | 16,080 | 16,399 | 25,380 | 26,443 | 23,746 | 21,330 | 21,917 | 21,120 | 20,522 | 240,574 |
| URANIA: | | | | | | | | | | | | | |
| Daily average | 3,242 | 3,149 | 3,020 | 3,485 | 3,567 | 3,572 | 3,643 | 3,682 | 3,715 | 3,614 | 3,507 | 3,339 | |
| Month | 100,502 | 91,321 | 93,620 | 104,550 | 110,577 | 107,160 | 112,933 | 114,142 | 111,450 | 112,034 | 105,210 | 103,509 | 1,267,008 |
| PLEASANT HILL: | | | | | | | | | | | | | |
| Daily average | 350 | 327 | 317 | 297 | 292 | 284 | 286 | 265 | 261 | 255 | 253 | 274 | |
| Month | 10,850 | 9,483 | 9,827 | 8,910 | 9,052 | 8,520 | 8,866 | 8,215 | 7,830 | 7,905 | 7,590 | 8,494 | 105,542 |
| ZWOLLE: | | | | | | | | | | | | | |
| Daily average | 6,468 | 5,967 | 5,612 | 6,367 | 6,906 | 7,114 | 7,515 | 7,186 | 7,840 | 8,045 | 8,637 | 8,345 | |
| Month | 200,508 | 173,043 | 173,972 | 191,010 | 214,086 | 213,420 | 232,965 | 222,766 | 235,200 | 249,395 | 259,110 | 258,695 | 2,624,170 |
| HOLLY: | | | | | | | | | | | | | |
| Daily average | 324 | 326 | 299 | 308 | 302 | 305 | 288 | 254 | 261 | 253 | 251 | 244 | |
| Month | 10,044 | 9,454 | 9,269 | 9,240 | 9,362 | 9,150 | 8,928 | 7,874 | 7,830 | 7,843 | 7,530 | 7,564 | 104,088 |
| SAREPTA-CARTERVILLE: | | | | | | | | | | | | | |
| Daily average | 827 | 862 | 811 | 830 | 811 | 947 | 909 | 880 | 833 | 825 | 823 | 759 | |
| Month | 25,637 | 25,027 | 25,141 | 24,900 | 25,141 | 28,410 | 28,179 | 27,280 | 24,990 | 25,575 | 24,690 | 23,529 | 308,499 |
| Daily average | 28,945 | 28,428 | 27,956 | 28,986 | 29,542 | 29,848 | 29,859 | 29,361 | 29,958 | 29,923 | 29,729 | 29,315 | 29,322 |
| Total 1932 | 897,295 | 824,412 | 866,636 | 869,580 | 915,802 | 895,440 | 925,629 | 910,191 | 898,740 | 927,613 | 891,870 | 908,765 | 10,731,973 |
| Total 1931 | 1,274,255 | 1,229,788 | 1,347,130 | 1,170,330 | 1,319,106 | 1,086,780 | 1,047,242 | 941,346 | 886,680 | 899,930 | 878,010 | 856,871 | 12,737,468 |
| Total 1930 | 1,163,554 | 1,138,896 | 1,271,465 | 1,258,500 | 1,326,701 | 1,200,630 | 1,253,113 | 1,280,393 | 1,194,060 | 1,296,203 | 1,332,400 | 1,333,549 | 14,948,964 |
| Total 1929 | 1,114,171 | 990,024 | 1,109,986 | 1,069,200 | 1,097,121 | 1,068,960 | 1,110,172 | 1,125,486 | 1,087,350 | 1,224,717 | 1,147,200 | 1,196,879 | 13,291,166 |
| Total 1928 | 1,369,146 | 1,213,555 | 1,369,115 | 1,411,890 | 1,388,034 | 1,272,040 | 1,306,433 | 1,246,200 | 1,177,920 | 1,196,669 | 1,163,400 | 1,155,091 | 15,367,493 |
| Total 1927 | 1,589,122 | 1,474,004 | 1,589,711 | 1,511,250 | 1,469,710 | 1,435,020 | 1,751,376 | 1,748,067 | 1,567,320 | 1,591,347 | 1,506,210 | 1,469,950 | 18,703,087 |
| Total 1926 | 1,543,788 | 1,288,000 | 1,511,219 | 1,556,580 | 1,830,705 | 1,809,180 | 1,780,175 | 1,761,513 | 1,703,190 | 1,801,224 | 1,696,411 | 1,699,644 | 19,771,640 |



# Six Range Changes

## Just change the tube and you change the range



No. 1 of a series of advertisements describing the Brown Mechanical Flow Meter Features.

THE feature of changeable range tubes has proved so practical with the Brown Electric Flow Meter that it has been incorporated in the new Brown Mechanical Flow Meter.

Flexibility well known to Brown Flow Meter users—to be able to change the range of a flow meter without disturbing the orifice, to be able to shift a flow meter from one job to another covering a wide range of operating conditions—these are the things that Brown Flow Meter users can do because the range tubes of Brown Flow Meters can easily be changed to fit a new set of operating conditions without disturbing the orifice already installed and without interrupting the flow in the pipe line.

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# Brown Mechanical Flow Meter

*To Measure is to Economize*

years ago and resulted, late in 1930, in completion of a well by C. B. Lenz that showed for a commercial producer of low gravity oil but was later lost on account of salt water. Lenz has continued his activities and his efforts attracted others in increasing numbers leading up to the completion last October of Fitzwater and others' No. 1 Beck in Section 33-15-26, as a 27-bbl. pumper from 2,931 feet after it had been plugged back from 2,954 feet. This was followed on December 18 by completion of Roy Baker and others' No. 1 Beck, in the same section and across the 40 acres on which the Fitzwater well is located, as a 350-bbl. flowing well from 12 feet of sand, total depth 2,926 feet. Since then there has been more or less trading and the number of locations and drilling wells has grown to 27, all centered closely around Section 33 though activity is spreading to the southwest, in which direction the usually dependable operators figure the prospective field will trend. Down to date 43 wells have been drilled in Miller County, not all of them, however, in this present campaign.

Arkansas Conservation Department reports analysis of the oil showing 33.6 gravity, 25 per cent gasoline, 20 per cent kerosene, 33.3 per cent gas oil, 19.7 per cent bottoms, 2 per cent loss. One refinery run reports a somewhat different result with the addition of considerable sulphur content.

Most of Arkansas' completions outside of Union County were old wells inactive over a long period of months and scattered all over the State. There were 50 completions in all, of which four were producers with a total initial of 712 bbls., two of them in Union with 335 bbls. and the others the two Miller County wells referred to. Of the remainder 45 were failures and one a gasser in Franklin County with 3,000,000 feet open flow. Last year there were 60 completions in the State of which 19 were producers with 4,128 bbls. initial, 36 failures and 6 gas wells. Thirteen of Union County's 15 completions were failures.

## MISSISSIPPI

Mississippi shared to its rightful extent in the wildcat play general throughout the territory and during the last few weeks of the year there was more than ever leasing. The same thing that is going on along the Conroe-Jackson trend in Louisiana is happening in Mississippi, particularly the southern part, where a number of the major companies are blocking huge tracts in preparation for, or following up, machine work. One of them, the Gulf Refining Co., has embarked on an extensive core drilling campaign on a block of more than 250,000 acres in Jackson, Harrison, Hancock, Stone, Perry, George and Green Counties, partly on results of machine work and partly on account of oil showings in two wells of the Jackson gas field. The Gardiner Eastman Lumber Co. has contracted with the Modisette Drilling Co. of El Dorado, Ark., to drill their holdings in Covington County. The program calls for four wells to 3,500 feet and one to 7,500 feet, and rig is up for the first of the series in the NE NW, Section 29-9-16. North of the Jackson-Conroe play Mississippi Oil & Gas Development Co. of Fort Worth has taken five 5,000-acre blocks in Sunflower, Bolivar and Leflore Counties, on each of which they are contracted to drill a 4,000-foot hole, with permit already out for the first.

Activity in the Jackson gas field in Hinds and Rankin Counties was on a par with 1931 except that the open flow of the 38 producers completed was 250,000,000 feet less than that of the 36 wells completed last year. The producing area was extended slightly to the northeast and north. The field is credited with a 500-bbl. producer of 18 gravity oil but the well quit flowing and when put on air lift developed salt water. It is understood to be still producing much salt water with the same amount of oil. An offset had a slight show of the same gravity oil with large quantities of water.

A wildcat in Sharkey County, United Gas Public Service Co.'s No. 1 Lenhart, Section 14-14-6, on a 70,000-acre block with good machine reports, was dry and abandoned at 3,807 feet. Another important wildcat that proved a disappointment was Gulf Refining Co.'s No. 1-A Long-Bell Lumber Co., Section 25-12-25, Clarke County, which developed 30 feet of 16 gravity oil from the Eutaw at 3,692-3,700 feet, but failed to respond on test. It was later deepened to 4,775 feet and finally abandoned in the Tuscaloosa without uncovering another show. In Jasper County, Bay Springs Petroleum Co.'s No. 1 Keys, Section 21-2-10, was dry and abandoned at 5,703 feet.

### NORTH LOUISIANA

**Completions by Parishes**

| | Comp. | Prod. | Dry | Gas* |
|---|---|---|---|---|
| Bienville | 1 | 0 | 1 | 0 |
| Beauregard | 1 | 0 | 1 | 0 |
| Bossier | 9 | 15 | 5 | 2 |
| Caddo | 15 | 252 | 2 | 10 |
| Claiborne | 4 | 0 | 1 | 3 |
| Catahoula | 1 | 0 | 0 | 0 |
| Concordia | 1 | 0 | 1 | 0 |
| Caldwell | 2 | 0 | 2 | 0 |
| DeSoto | 5 | 0 | 4 | 1 |
| Jackson | 1 | 0 | 1 | 0 |
| Lincoln | 1 | 0 | 1 | 0 |
| Morehouse | 4 | 0 | 0 | 4 |
| Natchitoches | 11 | 0 | 10 | 1 |
| Ouachita | 5 | 0 | 2 | 3 |
| Red River | 2 | 10 | 0 | 1 |
| Richland | 5 | 0 | 1 | 4 |
| Sabine | 251 | 37,120 | 144 | 1 |
| Union | 8 | 0 | 0 | 8 |
| Total 1932 | 327 | 37,397 | 177 | 38 |

*Gas production: Caddo, 95,000,000 feet; Bossier, 23,000,000 feet; Claiborne, 21,867,000 feet; DeSoto, 11,700,000 feet; Natchitoches, 3,000,000 feet; Morehouse, 21,506,955 feet; Ouachita, 7,200,000 feet; Richland, 66,884,000 feet; Sabine, 13,379,000 feet; Union, 46,982,000 feet; total, 310,518,955 feet. Total last year, 1,660,373,534 feet. Decrease, 1,349,854,579 feet.

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 19 | 5,520 | 8 | 3 |
| February | 15 | 3,110 | 9 | 1 |
| March | 23 | 570 | 13 | 7 |
| April | 13 | 2,330 | 7 | 2 |
| May | 20 | 3,281 | 5 | 3 |
| June | 32 | 9,006 | 16 | 5 |
| July | 27 | 1,540 | 17 | 1 |
| August | 35 | 1,331 | 18 | 1 |
| September | 31 | 3,197 | 18 | 5 |
| October | 35 | 3,112 | 21 | 3 |
| November | 29 | 4,386 | 16 | 3 |
| December | 48 | 2,115 | 29 | 4 |
| Total 1932 | 327 | 37,397 | 177 | 38 |
| Total 1931 | 358 | 22,842 | 139 | 76 |
| Difference | 69 | 14,555 | 47 | 38 |

### ARKANSAS

**Completions by Counties**

| | Comp. | Prod. | Dry | Gas* |
|---|---|---|---|---|
| Ashley | 1 | 0 | 1 | 0 |
| Clay | 1 | 0 | 1 | 0 |
| Cleburne | 1 | 0 | 1 | 0 |
| Cleveland | 1 | 0 | 1 | 0 |
| Crawford | 1 | 0 | 1 | 0 |
| Columbia | 1 | 0 | 1 | 0 |
| Dallas | 1 | 0 | 1 | 0 |
| Drew | 1 | 0 | 1 | 0 |
| Franklin | 1 | 0 | 0 | 1 |
| Hot Springs | 1 | 0 | 1 | 0 |
| Lafayette | 1 | 0 | 1 | 0 |
| Lincoln | 1 | 0 | 1 | 0 |
| Little River | 2 | 0 | 2 | 0 |
| Logan | 1 | 0 | 1 | 0 |
| Lonoke | 1 | 0 | 1 | 0 |
| Miller | 5 | 377 | 3 | 0 |
| Ouachita | 2 | 0 | 2 | 0 |
| Pike | 2 | 0 | 2 | 0 |
| Scott | 2 | 0 | 2 | 0 |
| Sevier | 1 | 0 | 1 | 0 |
| St. Francis | 2 | 0 | 2 | 0 |
| Union | 15 | 335 | 13 | 0 |
| Van Buren | 1 | 0 | 1 | 0 |
| Washington | 2 | 9 | 2 | 0 |
| Woodruff | 1 | 0 | 1 | 0 |
| Yell | 1 | 0 | 1 | 0 |
| Total 1932 | 50 | 712 | 45 | 1 |

*Gas production: Franklin, 3,000,000 feet.

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 2 | 0 | 2 | 0 |
| February | 1 | 0 | 1 | 0 |
| March | 1 | 35 | 0 | 0 |
| April | 4 | 300 | 3 | 0 |
| May | 3 | 0 | 3 | 0 |
| June | 7 | 0 | 7 | 0 |
| July | 1 | 0 | 1 | 0 |
| August | 2 | 0 | 2 | 0 |
| September | 5 | 0 | 4 | 1 |
| October | 3 | 27 | 2 | 0 |
| November | 8 | 0 | 8 | 0 |
| December | 13 | 350 | 12 | 0 |
| Total 1932 | 50 | 712 | 45 | 1 |
| Total 1931 | 60 | 4,128 | 36 | 5 |
| Difference | 10 | 3,416 | 9 | 4 |

### EAST TEXAS BORDER COUNTIES

**Completions by Counties**

| | Comp. | Prod. | Dry | Gas* |
|---|---|---|---|---|
| Bowie | 2 | 0 | 2 | 0 |
| Camp | 1 | 0 | 1 | 0 |
| Cass | 8 | 0 | 8 | 0 |
| Harrison | 6 | 0 | 5 | 1 |
| Marion | 3 | 0 | 3 | 0 |
| Panola | 7 | 0 | 2 | 5 |
| Red River | 4 | 0 | 4 | 0 |
| Shelby | 10 | 10 | 8 | 1 |
| Total 1932 | 41 | 10 | 33 | 7 |

*Gas production: Harrison, 4,000,000 feet; Panola, 24,134,000 feet; Shelby, 8,000,000 feet; total, 36,134,000 feet. Total last year, 39,942,000 feet.

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 3 | 0 | 2 | 1 |
| February | 3 | 0 | 2 | 1 |
| March | 3 | 0 | 2 | 1 |
| April | 5 | 0 | 5 | 3 |
| May | 6 | 0 | 6 | 0 |
| June | 1 | 0 | 1 | 0 |
| July | 4 | 10 | 3 | 0 |
| August | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 |
| October | 0 | 0 | 0 | 0 |
| November | 1 | 0 | 1 | 0 |
| December | 12 | 0 | 11 | 1 |
| Total 1932 | 41 | 10 | 33 | 7 |
| Total 1931 | 58 | 0 | 52 | 6 |
| Difference | 17 | 10 | 19 | 1 |

### MISSISSIPPI

**Completions by Counties**

| | Comp. | Prod. | Dry | Gas* |
|---|---|---|---|---|
| Clarke | 1 | 0 | 1 | 0 |
| Hinds | 16 | 0 | 2 | 14 |
| Jasper | 1 | 0 | 1 | 0 |
| Lowndes | 1 | 0 | 1 | 0 |
| Monroe | 2 | 0 | 2 | 0 |
| Noxubee | 1 | 0 | 1 | 0 |
| Rankin | 29 | 500 | 4 | 24 |
| Sharkey | 1 | 0 | 1 | 0 |
| Warren | 1 | 0 | 1 | 0 |
| Total 1932 | 53 | 500 | 14 | 38 |

*Gas production: Hinds, 338,142,000 feet; Rankin, 957,779,000 feet; total, 1,345,921,000 feet. Total 1931, 947,910,000 feet. Increase, 398,011,000 feet.

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 10 | 0 | 2 | 8 |
| February | 5 | 0 | 2 | 3 |
| March | 7 | 0 | 0 | 7 |
| April | 5 | 0 | 0 | 5 |
| May | 2 | 0 | 1 | 1 |
| June | 6 | 0 | 3 | 3 |
| July | 2 | 0 | 1 | 1 |
| August | 6 | 0 | 2 | 4 |
| September | 4 | 500 | 1 | 2 |
| October | 2 | 0 | 0 | 2 |
| November | 2 | 0 | 1 | 1 |
| December | 2 | 0 | 1 | 1 |
| Total 1932 | 53 | 500 | 14 | 38 |
| Total 1931 | 76 | 0 | 40 | 36 |
| Difference | 43 | 500 | 26 | 2 |

### ALABAMA

**Completions by Counties**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Clarke | 1 | 0 | 1 | 0 |
| Mobile | 2 | 0 | 2 | 0 |
| Total 1932 | 3 | 0 | 3 | 0 |

**Completions by Months**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 |
| April | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 |
| June | 0 | 0 | 0 | 0 |
| July | 1 | 0 | 1 | 0 |
| August | 1 | 0 | 1 | 0 |
| September | 0 | 0 | 0 | 0 |
| October | 0 | 0 | 0 | 0 |
| November | 0 | 0 | 0 | 0 |
| December | 1 | 0 | 1 | 0 |
| Total 1932 | 3 | 0 | 3 | 0 |
| Total 1931 | 0 | 0 | 0 | 0 |
| Difference | 3 | 0 | 3 | 0 |

## Arkansas

**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EL DORADO: | | | | | | | | | | | | | |
| Daily average | 3,140 | 3,073 | 3,043 | 3,132 | 3,044 | 3,042 | 3,107 | 3,052 | 3,005 | 2,963 | 2,915 | 2,793 | |
| Month | 97,340 | 89,117 | 94,333 | 93,960 | 94,364 | 91,260 | 96,317 | 95,542 | 90,150 | 91,853 | 87,450 | 86,583 | 1,108,269 |
| SMACKOVER (light): | | | | | | | | | | | | | |
| Daily average | 2,973 | 2,950 | 2,888 | 2,915 | 2,940 | 2,877 | 2,906 | 2,890 | 2,907 | 2,859 | 2,869 | 2,869 | |
| Month | 92,163 | 85,550 | 89,528 | 87,450 | 91,140 | 86,310 | 90,086 | 95,790 | 87,210 | 88,629 | 86,070 | 88,660 | 1,068,580 |
| SMACKOVER (heavy): | | | | | | | | | | | | | |
| Daily average | 23,595 | 22,915 | 23,224 | 23,682 | 23,645 | 23,961 | 24,117 | 23,992 | 23,666 | 23,649 | 23,654 | 23,411 | |
| Month | 731,445 | 664,535 | 719,944 | 710,490 | 732,995 | 718,830 | 747,627 | 743,752 | 709,950 | 733,119 | 709,620 | 725,741 | 8,648,048 |
| STEPHENS: | | | | | | | | | | | | | |
| Daily average | 663 | 657 | 660 | 634 | 649 | 672 | 693 | 610 | 974 | 71 | 212 | 362 | |
| Month | 20,553 | 19,053 | 20,460 | 19,020 | 20,119 | 20,160 | 21,483 | 18,910 | 29,220 | 2,201 | 6,360 | 11,222 | 208,761 |
| NEVADA COUNTY: | | | | | | | | | | | | | |
| Daily average | 1,211 | 1,222 | 1,241 | 1,216 | 1,122 | 1,078 | 1,047 | 993 | 957 | 911 | 912 | 915 | |
| Month | 37,541 | 35,438 | 38,471 | 36,480 | 34,782 | 32,340 | 32,457 | 30,783 | 28,710 | 28,241 | 27,360 | 28,365 | 390,968 |
| LISBON: | | | | | | | | | | | | | |
| Daily average | 566 | 569 | 556 | 535 | 505 | 503 | 496 | 464 | 462 | 459 | 462 | 463 | |
| Month | 17,546 | 16,501 | 17,236 | 16,050 | 15,655 | 15,090 | 15,376 | 14,384 | 13,860 | 14,229 | 13,860 | 14,353 | 184,140 |
| BRADLEY: | | | | | | | | | | | | | |
| Daily average | 1,201 | 1,187 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| Month | 37,231 | 34,423 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 71,654 |
| CHAMPAGNOLLE: | | | | | | | | | | | | | |
| Daily average | 1,909 | 1,810 | 1,873 | 1,874 | 1,904 | 1,883 | 1,840 | 1,786 | 1,713 | 1,706 | 1,683 | 1,556 | |
| Month | 59,179 | 52,490 | 58,063 | 56,220 | 59,024 | 56,490 | 57,040 | 55,366 | 51,390 | 52,886 | 50,490 | 48,236 | 656,874 |
| MILLER COUNTY: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 158 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4,898 | 4,898 |
| URBANA: | | | | | | | | | | | | | |
| Daily average | 273 | 395 | 302 | 985 | 533 | 83 | ..... | 270 | 292 | 283 | 1,313 | 951 | |
| Month | 8,618 | 11,455 | 24,862 | 28,950 | 16,523 | 2,490 | ..... | 8,370 | 8,760 | 8,773 | 39,390 | 29,481 | 187,672 |
| Daily average | 35,536 | 34,778 | 34,287 | 34,954 | 34 342 | 34,099 | 34,206 | 34,287 | 33,875 | 32,901 | 34,020 | 33,469 | 34,256 |
| Total 1932 | 1,101,616 | 1,008,562 | 1,062,897 | 1,048,620 | 1,064,602 | 1,022,970 | 1,060,386 | 1,062,897 | 1,019,250 | 1,019,931 | 1,020,600 | 1,037,539 | 12,529,870 |
| Total 1931 | 1,574,955 | 1,402,492 | 1,489,245 | 1,412,220 | 1,446,274 | 1,344,450 | 1,327,585 | 1,165,549 | 1,138,380 | 1,172,389 | 1,130,700 | 1,082,148 | 15,686,407 |
| Total 1930 | 1,817,685 | 1,608,276 | 1,817,871 | 1,724,460 | 1,659,595 | 1,704,060 | 1,712,680 | 1,700,102 | 1,583,280 | 1,636,552 | 1,557,870 | 1,590,961 | 20,114,792 |
| Total 1929 | 2,463,526 | 2,154,194 | 2,303,734 | 2,188,680 | 2,220,158 | 2,112,270 | 2,127,047 | 2,086,083 | 1,959,720 | 2,000,027 | 1,911,060 | 1,917,071 | 25,443,570 |
| Total 1928 | 2,791,922 | 2,571,575 | 2,687,948 | 2,472,600 | 2,842,847 | 2,075,911 | 2,702,139 | 2,711,787 | 2,540,070 | 2,652,848 | 2,476,080 | 2,521,571 | 32,137,934 |
| Total 1927 | 4,076,469 | 3,574,256 | 3,853,920 | 3,378,240 | 3,493,669 | 3,365,760 | 3,406,683 | 3,242,600 | 3,032,970 | 3,117,298 | 2,906,760 | 2,962,750 | 40,411,375 |
| Total 1926 | 5,489,604 | 4,756,836 | 5,115,837 | 5,127,510 | 5,432,939 | 5,064,760 | 5,019,892 | 4,878,191 | 4,603,230 | 4,625,133 | 4,299,480 | 4,266,189 | 58,729,606 |

# Extension of Pools, New Producing Methods and Deep Tests Feature North and West Texas

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

The most important work carried on in the Ranger and Wichita Falls districts during the year was perhaps the acid treatment of wells to increase production. The majority of these tests proved successful, bringing some of the wells back to flowing, while production in others was increased materially. More of this work will be done in 1933 in both districts, companies and independents alike using chemicals to disintegrate and clean out the lime. The work also extended over into the Panhandle district during the last month in the year and will be used in treating dolomite wells in that district.

Due to proration cutting wells in the Ranger and Wichita Falls district to the point where it did not pay to produce many of them, several hundred were abandoned and plugged during the year, and if curtailment becomes still more exacting several hundred more may be abandoned in 1933.

The majority of the drilling done in the Ranger district during 1932 was in the many fields located throughout the district. No discoveries of major importance were made, but several interesting extensions were reported.

### Many Extensions

The Lamont Drilling Co. extended production a mile in southeast Archer County when it brought in a well in Section 1, I.&G.N. Survey, from sand topped at 689-701 feet. It made 312 bbls. per hour initially. Several wells have been drilled around this extension, limiting the area to a small sector. The pool is now known as the Tedford Pool.

A. Z. Kouri drilled in No. 1 Montgomery 1½ miles east of the Thomas Pool, central Archer County, thereby opening up this area to more drilling. It encountered the sand at 1,120-24 feet making a 40 bbls. well. It is located in Section 133 of the J. W. Harris Subdivision,

W. B. Hamilton and others' No. 1 A. J. Ikard, southwest of Archer City, Archer County, extended production 2 miles. Pay was found at 1,155-63 feet. It is a small well on the pump. The area has already been defined by other tests.

A new sand was logged on the Waggoner "C" lease in Wilbarger County in a Barkley & Meadows test. This sand was cored at 1,109-25 feet, the regular sand in this area producing at 1,700-1,800 feet. The well made 49 bbls. in 24 hours pumping.

The Texas Company's No. 1 E. L. Burns in Section 1,986, T.E.&L. Survey, 3 miles northeast of Bratcher & King Royalty Co.'s Lowe discovery well, Young County, also opens up another area for this county. The test encountered its first showing at 4,098-4,103 feet, drilling into another at 4,103-11 feet. It topped Caddo lime at 4,067 feet and is slowly drilling ahead in an effort to pick up heavier production.

The Helena Oil & Gas Co.'s No. 1 M. B. Ray in the William Henry Survey, 1½ miles northeast of Archer City, Archer County, and 1 mile north of the nearest producer, has proved the best well in this area where spotted sand conditions exist. It topped the sand at 1,131-37 feet and made a 50-bbl. well. This area has also been defined by dry holes, making a small pool.

The Texas Company's No. 3 Johnson in Section 36, Block L, S.P. Survey, Foard County, picked up a gas sand at 2,949 feet and encountered an increase at 3,088-98 feet, striking 30,000,000 feet, but the company has killed the gas to drill deeper in quest of oil. The gas sand is said to be in the Cisco series. If oil production is not found in commercial quantities the company will no doubt plug back to produce the gas.

Fain & McGaha's new pool discovery was brought in 2 miles northeast of Holliday in Archer County. Sand was topped at 1,780 feet in this discovery.

## North Texas

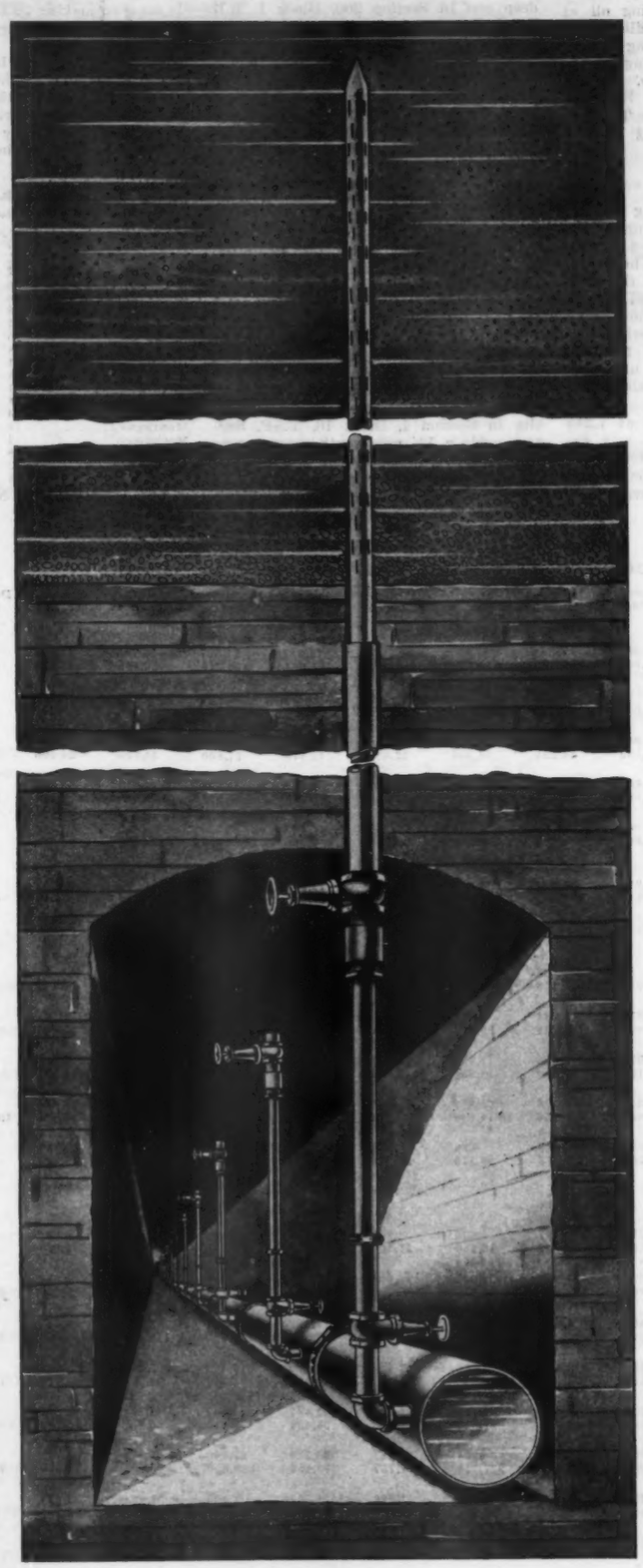
**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BURKBURNETT: | | | | | | | | | | | | | |
| Daily average | 4,942 | 5,912 | 5,763 | 5,375 | 5,696 | 5,815 | 5,811 | 5,750 | 5,646 | 5,304 | 4,893 | 4,862 | |
| Month | 153,202 | 171,448 | 178,653 | 161,250 | 176,576 | 174,450 | 180,141 | 178,250 | 169,380 | 164,424 | 146,790 | 150,722 | 2,005,286 |
| ELECTRA: | | | | | | | | | | | | | |
| Daily average | 7,656 | 7,916 | 7,666 | 7,878 | 8,163 | 8,484 | 8,473 | 8,467 | 8,392 | 8,275 | 8,279 | 8,319 | |
| Month | 237,336 | 229,564 | 237,646 | 236,340 | 253,053 | 254,520 | 262,663 | 262,477 | 251,760 | 256,525 | 248,370 | 257,889 | 2,988,143 |
| IOWA PARK, K.M.A.: | | | | | | | | | | | | | |
| Daily average | 2,993 | 2,810 | 2,803 | 2,776 | 2,771 | 2,790 | 2,756 | 2,725 | 2,760 | 2,708 | 2,690 | 2,663 | |
| Month | 92,783 | 81,490 | 86,893 | 83,280 | 85,901 | 83,700 | 84,816 | 84,475 | 82,800 | 83,948 | 80,700 | 82,553 | 1,013,339 |
| ARCHER COUNTY: | | | | | | | | | | | | | |
| Daily average | 10,295 | 10,982 | 10,565 | 10,767 | 10,812 | 11,306 | 11,445 | 11,606 | 11,509 | 11,285 | 11,282 | 11,184 | |
| Month | 319,145 | 318,478 | 327,608 | 323,010 | 335,172 | 339,180 | 354,795 | 359,786 | 345,270 | 349,925 | 338,460 | 346,704 | 4,057,536 |
| CLAY COUNTY: | | | | | | | | | | | | | |
| Daily average | 467 | 494 | 473 | 479 | 473 | 469 | 471 | 467 | 462 | 469 | 461 | 457 | |
| Month | 14,477 | 14,326 | 14,518 | 14,370 | 14,663 | 14,070 | 14,601 | 14,477 | 13,860 | 14,539 | 13,830 | 14,167 | 172,198 |
| WILBARGER COUNTY: | | | | | | | | | | | | | |
| Daily average | 9,796 | 9,657 | 9,564 | 9,616 | 9,733 | 9,411 | 9,360 | 8,963 | 8,576 | 8,363 | 8,525 | 8,650 | |
| Month | 303,676 | 280,053 | 296,484 | 288,480 | 301,723 | 282,330 | 290,160 | 277,822 | 257,280 | 259,253 | 255,760 | 268,150 | 3,361,161 |
| MONTAGUE COUNTY: | | | | | | | | | | | | | |
| Daily average | 4,016 | 4,302 | 4,038 | 4,019 | 3,989 | 4,007 | 4,014 | 4,006 | 4,109 | 4,111 | 4,047 | 3,917 | |
| Month | 124,496 | 124,758 | 125,178 | 120,570 | 123,659 | 120,210 | 124,434 | 124,186 | 123,270 | 127,441 | 121,410 | 121,427 | 1,481,039 |
| YOUNG COUNTY: | | | | | | | | | | | | | |
| Daily average | 8,999 | 9,546 | 9,499 | 9,521 | 9,738 | 9,726 | 9,476 | 9,112 | 9,204 | 8,913 | 8,754 | 8,718 | |
| Month | 278,969 | 277,414 | 294,469 | 285,630 | 301,723 | 291,780 | 293,756 | 282,472 | 276,120 | 276,303 | 262,620 | 270,258 | 3,391,514 |
| BAYLOR COUNTY: | | | | | | | | | | | | | |
| Daily average | 463 | 481 | 455 | 446 | 443 | 439 | 435 | 441 | 437 | 438 | 433 | 437 | |
| Month | 14,353 | 13,949 | 14,105 | 13,380 | 13,733 | 13,170 | 13,485 | 13,671 | 13,110 | 13,578 | 12,990 | 13,337 | 162,761 |
| COOKE COUNTY: | | | | | | | | | | | | | |
| Daily average | 1,504 | 1,531 | 1,522 | 1,510 | 1,504 | 1,514 | 1,507 | 1,509 | 1,665 | 1,623 | 1,539 | 1,463 | |
| Month | 46,624 | 44,399 | 47,182 | 45,300 | 46,624 | 45,420 | 46,717 | 46,779 | 49,950 | 50,313 | 47,670 | 45,353 | 562,331 |
| FOARD COUNTY: | | | | | | | | | | | | | |
| Daily average | 71 | 65 | 57 | 59 | 58 | 57 | 56 | 55 | 54 | 55 | 52 | 53 | |
| Month | 2,201 | 1,885 | 1,767 | 1,770 | 1,798 | 1,710 | 1,736 | 1,705 | 1,620 | 1,705 | 1,560 | 1,643 | 21,100 |
| Daily average | 51,202 | 53,716 | 52,413 | 52,446 | 53,375 | 54,018 | 53,784 | 53,100 | 52,814 | 51,547 | 51,005 | 50,713 | 52,502 |
| Total 1932 | 1,587,262 | 1,557,764 | 1,624,803 | 1,573,380 | 1,654,625 | 1,620,540 | 1,667,304 | 1,646,100 | 1,584,420 | 1,597,957 | 1,530,150 | 1,572,103 | 19,216,405 |
| Total 1931 | 1,997,361 | 1,680,504 | 1,876,306 | 1,790,400 | 1,809,873 | 1,771,680 | 1,785,011 | 1,758,816 | 1,896,360 | 1,900,455 | 1,784,190 | 1,799,922 | 21,850,878 |
| Total 1930 | 2,768,398 | 2,562,792 | 2,860,587 | 3,053,550 | 3,153,351 | 3,043,020 | 2,881,450 | 2,759,217 | 2,430,390 | 2,367,904 | 2,226,210 | 2,191,204 | 32,299,068 |
| Total 1929 | 2,794,619 | 2,412,783 | 2,760,705 | 2,729,250 | 2,793,286 | 2,759,550 | 3,108,990 | 3,128,458 | 2,967,270 | 3,015,556 | 2,832,930 | 2,958,330 | 34,261,732 |
| Total 1928 | 2,441,902 | 2,347,790 | 2,483,100 | 2,465,970 | 2,690,559 | 2,687,207 | 2,977,393 | 3,151,181 | 2,915,790 | 2,987,594 | 2,794,890 | 2,957,989 | 32,711,065 |
| Total 1927 | 2,884,736 | 2,621,220 | 2,996,367 | 2,885,220 | 3,202,703 | 3,064,920 | 3,042,332 | 2,993,236 | 2,882,790 | 2,708,780 | 2,641,140 | 2,680,632 | 34,605,076 |

## Texas Panhandle

**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARSON COUNTY: | | | | | | | | | | | | | |
| Daily average | 5,296 | 4,647 | 4,530 | 4,927 | 5,250 | 5,417 | 5,818 | 5,788 | 5,372 | 4,712 | 5,206 | 4,960 | |
| Month | 164,176 | 134,763 | 140,430 | 148,110 | 162,750 | 162,510 | 180,358 | 179,428 | 161,160 | 146,072 | 156,180 | 153,760 | 1,889,697 |
| HUTCHINSON COUNTY: | | | | | | | | | | | | | |
| Daily average | 12,176 | 12,114 | 12,259 | 12,646 | 13,487 | 13,114 | 12,910 | 12,687 | 11,766 | 11,788 | 10,812 | 11,625 | |
| Month | 377,456 | 351,306 | 380,029 | 379,380 | 418,097 | 393,420 | 400,210 | 393,297 | 352,980 | 365,428 | 324,360 | 360,375 | 4,496,338 |
| WHEELER COUNTY: | | | | | | | | | | | | | |
| Daily average | 384 | 371 | 339 | 487 | 425 | 403 | 399 | 413 | 373 | 366 | 226 | 240 | |
| Month | 11,904 | 10,759 | 10,509 | 14,610 | 13,175 | 12,090 | 12,369 | 12,803 | 11,340 | 9,486 | 6,780 | 7,440 | 133,265 |
| GRAY COUNTY: | | | | | | | | | | | | | |
| Daily average | 40,531 | 29,097 | 29,030 | 31,457 | 31,213 | 33,147 | 34,110 | 33,915 | 29,614 | 28,413 | 28,357 | 29,609 | |
| Month | 946,461 | 843,813 | 901,450 | 944,610 | 967,603 | 994,410 | 1,057,410 | 1,051,365 | 888,420 | 880,803 | 850,710 | 917,879 | 11,244,964 |
| MOORE COUNTY: | | | | | | | | | | | | | |
| Daily average | 1,197 | 1,787 | 938 | 1,238 | 1,412 | 1,377 | 1,315 | 937 | 762 | 735 | 611 | 606 | |
| Month | 37,107 | 51,823 | 29,078 | 37,140 | 43,772 | 41,310 | 37,665 | 29,047 | 22,860 | 22,878 | 18,330 | 18,786 | 389,796 |
| Daily average | 49,584 | 48,016 | 47,146 | 50,795 | 51,787 | 53,458 | 54,452 | 53,740 | 47,892 | 45,967 | 45,212 | 47,040 | 49,601 |
| Total 1932 | 1,537,104 | 1,392,464 | 1,461,526 | 1,523,850 | 1,605,297 | 1,603,740 | 1,688,012 | 1,665,940 | 1,436,760 | 1,424,667 | 1,356,360 | 1,458,240 | 18,154,060 |
| Total 1931 | 1,754,042 | 1,499,736 | 1,593,153 | 1,622,220 | 1,858,202 | 1,764,960 | 1,755,003 | 1,813,965 | 1,926,750 | 2,015,186 | 1,657,680 | 1,599,352 | 20,860,249 |
| Total 1930 | 2,655,398 | 2,467,080 | 2,750,971 | 2,835,960 | 3,297,315 | 3,156,941 | 3,024,423 | 3,015,277 | 2,388,000 | 2,523,617 | 2,190,900 | 2,186,151 | 32,492,032 |
| Total 1929 | 1,552,876 | 1,552,196 | 1,845,213 | 1,824,930 | 2,086,579 | 2,623,680 | 2,918,278 | 4,985,608 | 3,548,100 | 4,242,538 | 2,962,110 | 3,230,634 | 31,742,794 |
| Total 1928 | 2,466,559 | 2,287,607 | 2,252,173 | 2,044,020 | 2,115,409 | 1,965,484 | 1,973,595 | 1,960,316 | 1,897,110 | 2,061,376 | 1,885,710 | 1,884,335 | 24,736,494 |
| Total 1927 | 4,004,053 | 3,528,280 | 3,654,590 | 3,749,810 | 4,174,181 | 3,814,230 | 3,459,910 | 3,071,790 | 2,883,640 | 2,735,719 | 2,488,530 | 2,536,097 | 40,089,780 |
| Total 1926 | 157,077 | 152,264 | 245,024 | 393,860 | 876,897 | 1,430,400 | 2,023,742 | 3,972,648 | 3,421,890 | 4,534,339 | 4,595,220 | 4,741,326 | 25,545,691 |



# Underground Water in VOLUME for the Oil Industry

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which made a 150-bbl. producer, opening up more drilling for this immediate area.

### WEST TEXAS

Glasscock, Howard, Pecos and Ward Counties witnessed most of the drilling in West Texas in 1932. A western extension of the Howard-Glasscock County area, and the expansion of the small producing Denman Pool in eastern Howard County, were responsible for these two counties showing much activity. Most of the drilling done in Pecos County was in shallow pools, particularly the Pecos Valley Pool and the Toborg-Tippett Pool. Only one well was drilled in the Yates Pool during the year, that one by the Gulf Production Co. Southern Ward County and the Edwards-O'Brien-Hutchings area in northern Ward accounted for practically all of the drilling done in that county during the past 12 months.

#### Two Pools Opened

Only two pool openers were brought in during the year. One of these was in western Ward County. Shipley and others drilled in this small Delaware sand producer in Section 3, Block 1, W.&N.W. Survey. Another try, a couple of miles north of it, by the Simms Oil Co. and others ended in a failure. Whether or not this pool will amount to much remains to be seen, deep drilling and small production has not stimulated the drilling of other tests around this first well, which was the first Delaware sand producer for Ward County.

Harrison, Turner and others' No. 1 Addis in Section 35, Block 43, Township 2s, T.&P. Survey, Ector County, opened up the third producing area for that county in November. It picked up gas at 3,650-70 feet, and registered 6,500,000 feet at 3,820 feet, showing oil at 3,846-54 feet. It has been drilled past 4,000 feet and is now producing around 600 bbls. per day, the oil going to the Howard County Refining Co. at Big Spring. A short line was laid from the well to a loading rack in the T. & P. Railroad and the oil is being shipped from this point.

#### Ordovician Test

One of the most interesting wildcat tests drilled in the district during the year was the Ordovician test on a unitized block in Crockett County. The Stanolind Oil & Gas Co. is drilling the well, which is located in Section 67, Block UV, G.C.&S.F. Survey. It is now down below 7,630 feet with no showings encountered. It will probably go to 8,500 feet before being abandoned, unless it strikes oil in commercial quantities above this depth.

The Ellenberger was topped at 7,245 feet, and the first saturation was encountered at 7,278-85 feet. Seven-inch casing was run and a test made of this saturated streak of porous lime, but it failed to produce. The Continental Oil Co., the California Co., Phillips Petroleum Co., Mid-Kansas Oil & Gas Co., Empire Gas & Fuel Co., Sun Oil Co., Hanson, Texas Gulf Production Co. and Nordon Corp. hold interest under this unitized block.

Cranfill & Reynolds' No. 1 George, a deep test in Section 200, Block 1, B.B. B.&C. Survey, northeastern Fisher County, held interest for several months during the latter part of the year, but it failed to make a deep producer and is now plugging to abandon. It was plugged back from total depth of 6,494 feet to 6,078 feet and given a shot from 5,840-6,060 feet, having formerly encountered a good oil show from 6,054-58 feet, but the shot had no successful results.

Condor Petroleum Co. opened a small pool in the Hawley area the latter part of December when it topped the Hawley pay at 1,915 feet and made an initial production of 264 bbls. in 24 hours. It is located in Section 3, Block 20, T.&P. Survey, 6 miles southeast of the Hawley Pool. Gravity of the oil is 38 degrees. The oil will be sold to a refinery at Hawley. The Hawley Pool is a small one, and this second pool for this area is considered as about the same caliber.

Renaud and Prettyman's No. 1 University in Section 4, Block 16, T.&P. Survey, made a 1¼-mile south extension to the O'Brien-Edwards Pool, Ward County, during the latter part of the year when it topped the lime pay at 2,685 feet and was drilled to 2,763 feet striking water and plugged back to 2,760 feet to complete.

Sid Richardson and others' No. 2 Sealy estate, Section 94, Block A, G.M. M.B.&A. Survey, Winkler County, extended production on the north end of O'Brien-Edwards Pool during the year. It came in making 25 bbls. per hour from pay topped at 3,105 feet. This well meant a 1¼-mile northeast extension to the pool, which has now increased to major proportions, but which has not been rapidly drilled due to the Gulf Production Co. holding the majority of the acreage in the block, and only running a couple of strings of tools in proving up the producing acreage.

#### NORTH CENTRAL TEXAS

**Summary of Completed Wells in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Archer | 302 | 13,676 | 149 | 1 |
| Baylor | 5 | 397 | 2 | 0 |
| Brown | 32 | 265 | 19 | 4 |
| Callahan | 86 | 574 | 51 | 5 |
| Clay | 8 | 0 | 8 | 0 |
| Coleman | 30 | 1,111 | 13 | 2 |
| Comanche | 1 | 0 | 1 | 0 |
| Cooke | 10 | 100 | 6 | 0 |
| Eastland | 19 | 725 | 7 | 5 |
| Erath | 1 | 0 | 0 | 1 |
| Foard | 1 | 0 | 1 | 0 |
| Fannin | 1 | 0 | 1 | 0 |
| Grayson | 4 | 0 | 4 | 0 |
| Jack | 24 | 275 | 22 | 0 |
| Montague | 11 | 1,044 | 4 | 0 |
| McCulloch | 1 | 0 | 1 | 0 |
| Palo Pinto | 39 | 349 | 17 | 17 |
| Parker | 2 | 0 | 1 | 1 |
| Shackelford | 93 | 861 | 32 | 10 |

(Continued on Next Page)

## West Texas

**Daily Average and Monthly Production of Crude Oil in 1932**

| Field and county— | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHURCH FIELDS & McELROY, CRANE: | | | | | | | | | | | | | |
| Daily average | 15,500 | 15,674 | 16,296 | 17,524 | 17,862 | 17,531 | 17,403 | 15,644 | 14,807 | 13,755 | 13,943 | 13,935 | |
| Month | 480,500 | 454,546 | 505,176 | 525,730 | 553,722 | 525,930 | 539,493 | 484,964 | 444,210 | 426,405 | 418,290 | 431,985 | 5,790,941 |
| SAND HILLS, CRANE: | | | | | | | | | | | | | |
| Daily average | 26 | 28 | 36 | 36 | 38 | 34 | 32 | 35 | 36 | 18 | 16 | 28 | |
| Month | 806 | 812 | 1,116 | 1,080 | 1,178 | 1,020 | 992 | 1,085 | 1,080 | 558 | 480 | 868 | 11,075 |
| WORLD, CROCKETT: | | | | | | | | | | | | | |
| Daily average | 970 | 962 | 1,012 | 1,086 | 1,105 | 1,294 | 1,216 | 1,370 | 1,260 | 1,126 | 1,180 | 1,163 | |
| Month | 30,070 | 27,398 | 31,372 | 32,580 | 34,255 | 36,240 | 37,696 | 42,470 | 37,800 | 34,906 | 35,400 | 36,053 | 416,740 |
| PENN, ECTOR: | | | | | | | | | | | | | |
| Daily average | 6,091 | 5,411 | 5,494 | 4,426 | 3,607 | 4,028 | 4,019 | 4,039 | 4,034 | 4,014 | 3,984 | 4,011 | |
| Month | 188,831 | 156,919 | 170,314 | 132,780 | 111,817 | 120,840 | 124,589 | 125,209 | 121,020 | 124,434 | 119,520 | 124,341 | 1,620,604 |
| COWDEN, ECTOR (NORTH): | | | | | | | | | | | | | |
| Daily average | 75 | 54 | 58 | 60 | 45 | 40 | 58 | 35 | 25 | 25 | 21 | 30 | |
| Month | 2,325 | 1,566 | 1,798 | 1,800 | 1,395 | 1,200 | 1,798 | 1,085 | 750 | 1,085 | 930 | 930 | 16,662 |
| SETTLES-ROBERTS & CHALK, HOWARD-GLASS: | | | | | | | | | | | | | |
| Daily average | 24,770 | 23,114 | 23,233 | 22,828 | 21,037 | 16,695 | 15,456 | 15,666 | 15,452 | 14,990 | 12,502 | 13,959 | |
| Month | 767,870 | 641,308 | 720,223 | 684,840 | 652,147 | 500,850 | 479,136 | 485,646 | 463,560 | 464,690 | 375,060 | 432,729 | 6,668,057 |
| BOREN, GARZA: | | | | | | | | | | | | | |
| Daily average | 22 | 15 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| Month | 682 | 426 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,117 |
| TANKERSLEY, IRION: | | | | | | | | | | | | | |
| Daily average | 45 | 25 | 36 | 32 | 38 | 30 | 30 | 28 | 25 | 30 | 39 | 35 | |
| Month | 1,395 | 725 | 1,116 | 960 | 1,178 | 900 | 930 | 868 | 750 | 930 | 1,170 | 1,085 | 11,905 |
| WHEAT, LOVING: | | | | | | | | | | | | | |
| Daily average | 3,467 | 3,987 | 2,927 | 2,814 | 3,084 | 3,190 | 3,110 | 3,320 | 3,315 | 3,111 | 3,161 | 3,096 | |
| Month | 107,477 | 86,623 | 90,737 | 84,420 | 95,604 | 95,700 | 96,410 | 102,920 | 99,450 | 96,441 | 94,830 | 95,976 | 1,146,588 |
| WESTBROOK-IATAN, MITCHELL: | | | | | | | | | | | | | |
| Daily average | 1,682 | 1,487 | 1,594 | 1,671 | 1,654 | 1,631 | 1,341 | 1,363 | 1,611 | 1,503 | 1,553 | 1,607 | |
| Month | 52,142 | 43,123 | 49,414 | 50,130 | 51,274 | 48,930 | 41,571 | 42,253 | 48,330 | 46,748 | 46,590 | 49,817 | 570,322 |
| YATES, PECOS: | | | | | | | | | | | | | |
| Daily average | 63,349 | 56,537 | 57,177 | 64,121 | 64,976 | 65,818 | 65,571 | 65,897 | 66,549 | 62,816 | 66,336 | 62,479 | |
| Month | 1,963,819 | 1,639,573 | 1,772,487 | 1,923,630 | 2,014,256 | 1,974,540 | 2,032,701 | 2,042,807 | 1,996,470 | 1,947,296 | 1,990,750 | 1,936,849 | 23,234,208 |
| TAYLOR-LINK-UNIVERSITY, PECOS: | | | | | | | | | | | | | |
| Daily average | 1,028 | 916 | 899 | 875 | 918 | 898 | 870 | 844 | 816 | 774 | 791 | 809 | |
| Month | 31,868 | 26,564 | 27,590 | 26,250 | 28,458 | 26,940 | 26,970 | 26,164 | 24,480 | 23,994 | 23,730 | 25,079 | 318,087 |
| MASTERSON, PECOS: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 11 | 10 | 10 | 12 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 330 | 310 | 300 | 372 | 1,312 |
| PECOS VALLEY, PECOS: | | | | | | | | | | | | | |
| Daily average | 252 | 170 | 208 | 270 | 397 | 406 | 360 | 196 | 224 | 182 | 202 | 251 | |
| Month | 7,812 | 4,930 | 6,448 | 8,100 | 12,307 | 12,180 | 11,160 | 6,076 | 6,720 | 5,642 | 6,060 | 7,781 | 95,216 |
| BIG LAKE, REAGAN: | | | | | | | | | | | | | |
| Daily average | 26,131 | 27,892 | 29,420 | 28,030 | 24,500 | 24,300 | 24,050 | 24,917 | 22,616 | 21,114 | 21,996 | 22,494 | |
| Month | 810,061 | 808,868 | 912,330 | 840,900 | 759,500 | 729,000 | 745,550 | 772,427 | 678,480 | 654,534 | 659,880 | 697,314 | 9,068,844 |
| McCAMEY, CRANE-UPTON: | | | | | | | | | | | | | |
| Daily average | 4,516 | 4,169 | 4,300 | 4,407 | 4,637 | 4,737 | 4,645 | 4,102 | 3,931 | 3,821 | 4,453 | 4,240 | |
| Month | 139,996 | 120,901 | 133,300 | 132,210 | 143,747 | 142,110 | 143,995 | 127,162 | 117,930 | 118,451 | 133,590 | 131,440 | 1,584,832 |
| O'BRIEN, WARD: | | | | | | | | | | | | | |
| Daily average | 2,739 | 2,756 | 2,711 | 3,184 | 3,162 | 3,208 | 3,498 | 3,422 | 3,438 | 3,299 | 3,647 | 3,962 | |
| Month | 84,909 | 79,924 | 84,041 | 95,520 | 98,022 | 96,240 | 108,438 | 106,082 | 103,140 | 102,269 | 109,410 | 122,822 | 1,190,817 |
| SHIPLEY-BENNETT, WARD: | | | | | | | | | | | | | |
| Daily average | 1,069 | 1,213 | 1,245 | 1,251 | 1,513 | 1,717 | 1,812 | 1,887 | 1,967 | 1,951 | 1,932 | 2,031 | |
| Month | 33,139 | 35,177 | 38,595 | 37,530 | 46,972 | 51,510 | 56,172 | 58,497 | 59,010 | 60,481 | 57,960 | 62,961 | 597,904 |
| HENDRICK AND LECK, WINKLER: | | | | | | | | | | | | | |
| Daily average | 33,665 | 28,564 | 30,416 | 31,100 | 31,551 | 30,907 | 29,927 | 28,376 | 27,560 | 26,774 | 25,712 | 25,321 | |
| Month | 1,043,615 | 828,356 | 942,896 | 933,000 | 978,081 | 927,210 | 927,737 | 879,656 | 826,800 | 829,994 | 771,360 | 784,951 | 10,673,656 |
| NORTH WINKLER, WINKLER: | | | | | | | | | | | | | |
| Daily average | 1,188 | 1,131 | 1,264 | 1,335 | 1,304 | 1,251 | 1,216 | 1,203 | 1,169 | 1,138 | 1,676 | 1,827 | |
| Month | 36,828 | 32,799 | 39,184 | 40,050 | 40,424 | 37,530 | 37,696 | 37,293 | 35,070 | 35,278 | 50,100 | 56,637 | 478,889 |
| COURTNEY, PECOS: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 61 | 60 | 69 | 45 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,830 | 1,860 | 2,070 | 1,395 | 7,155 |
| ADDIS, CROCKETT: | | | | | | | | | | | | | |
| Daily average | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 100 | |
| Month | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3,100 | 3,100 |
| Daily average | 186,595 | 172,195 | 178,327 | 185,050 | 181,427 | 177,629 | 174,614 | 172,342 | 168,907 | 160,526 | 163,217 | 161,435 | 173,519 |
| Total 1932 | 5,784,135 | 4,991,945 | 5,528,137 | 5,551,500 | 5,624,237 | 5,328,870 | 5,413,024 | 5,343,602 | 5,067,210 | 4,976,306 | 4,896,510 | 5,004,485 | 63,508,071 |
| Total 1931 | 6,817,675 | 6,813,660 | 7,291,190 | 7,062,640 | 6,404,972 | 6,300,510 | 6,431,033 | 6,206,888 | 6,133,560 | 6,151,361 | 5,841,310 | 5,710,200 | 77,264,899 |
| Total 1930 | 10,606,833 | 9,574,215 | 10,412,647 | 9,436,501 | 9,667,141 | 9,130,220 | 9,139,390 | 8,177,844 | 7,800,596 | 8,021,504 | 8,110,063 | 7,620,660 | 107,759,964 |
| Total 1929 | 11,380,241 | 9,966,066 | 11,068,104 | 10,599,784 | 10,990,292 | 10,987,539 | 12,321,644 | 11,602,389 | 10,994,567 | 11,245,661 | 10,411,381 | 10,667,906 | 132,785,274 |
| Total 1928 | 8,521,701 | 9,036,190 | 10,330,377 | 11,149,642 | 9,873,668 | 8,947,700 | 10,618,416 | 10,735,515 | 10,307,646 | 10,842,478 | 9,716,950 | 10,202,810 | 130,432,993 |
| Total 1927 | 2,126,352 | 1,857,800 | 2,321,510 | 2,752,080 | 3,514,935 | 3,333,150 | 3,490,693 | 4,255,804 | 5,405,430 | 6,441,924 | 6,583,410 | 7,596,569 | 49,689,657 |

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Somerville | 1 | 0 | 1 | 0 |
| Stephens | 4 | 0 | 4 | 0 |
| Throckmorton | 13 | 133 | 6 | 1 |
| Taylor | 1 | 0 | 1 | 0 |
| Wichita | 136 | 2,218 | 73 | 0 |
| Wise | 1 | 0 | 1 | 0 |
| Wilbarger | 27 | 557 | 13 | 0 |
| Young | 361 | 7,376 | 232 | 1 |
| Total 1932 | 1,214 | 29,661 | 670 | 52 |

**Completions by Month**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 48 | 1,596 | 24 | 0 |
| February | 67 | 2,036 | 39 | 2 |
| March | 57 | 984 | 29 | 8 |
| April | 101 | 2,728 | 62 | 5 |
| May | 123 | 3,728 | 52 | 10 |
| June | 127 | 4,128 | 78 | 2 |
| July | 125 | 3,581 | 71 | 7 |
| August | 123 | 5,142 | 52 | 5 |
| September | 128 | 2,625 | 74 | 2 |
| October | 111 | 1,679 | 65 | 6 |
| November | 119 | 1,266 | 72 | 4 |
| December | 96 | 1,168 | 51 | 1 |
| Total 1932 | 1,214 | 29,661 | 670 | 52 |
| Total 1931 | 1,055 | 31,246 | 677 | 78 |
| Difference | 159 | 1,585 | 7 | 26 |

**TEXAS PANHANDLE**

**Summary of Completed Wells in 1932**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Briscoe | 1 | 0 | 1 | 0 |
| Carson | 30 | 2,201 | 2 | 12 |
| Cochran | 1 | 0 | 1 | 0 |
| Childress | 1 | 0 | 1 | 0 |
| Gray | 94 | 42,695 | 8 | 7 |
| Hutchinson | 17 | 1,711 | 6 | 2 |
| Moore | 10 | 530 | 3 | 5 |
| Parmer | 1 | 0 | 1 | 0 |
| Potter | 1 | 0 | 0 | 1 |
| Wheeler | 3 | 15 | 2 | 0 |
| Total 1932 | 159 | 48,152 | 22 | 27 |

**Completions by Months**

| Month— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 14 | 1,504 | 0 | 6 |
| February | 6 | 1,525 | 2 | 1 |
| March | 7 | 570 | 1 | 3 |
| April | 9 | 3,094 | 0 | 1 |
| May | 9 | 915 | 1 | 3 |
| June | 20 | 6,261 | 2 | 3 |
| July | 17 | 3,500 | 5 | 1 |
| August | 15 | 2,512 | 3 | 2 |
| September | 17 | 6,145 | 1 | 2 |
| October | 14 | 10,546 | 3 | 0 |
| November | 13 | 2,470 | 2 | 4 |
| December | 18 | 9,110 | 2 | 2 |
| Total 1932 | 159 | 48,152 | 22 | 27 |
| Total 1931 | 199 | 33,317 | 29 | 77 |
| Difference | 40 | 14,835 | 7 | 50 |

**WEST TEXAS**

**Summary of Completed Wells in 1932**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Andrews | 1 | 200 | 0 | 0 |
| Borden | 2 | 0 | 2 | 0 |
| Crane | 3 | 682 | 0 | 0 |
| Crockett | 1 | 0 | 0 | 1 |
| Concho | 1 | 0 | 1 | 0 |
| Coke | 2 | 0 | 2 | 0 |
| Culberson | 1 | 0 | 1 | 0 |
| Ector | 1 | 0 | 0 | 1 |
| Fisher | 5 | 970 | 2 | 0 |
| Garza | 1 | 0 | 1 | 0 |
| Glasscock | 18 | 11,410 | 3 | 0 |
| Howard | 16 | 3,850 | 3 | 0 |
| Gaines | 1 | 0 | 1 | 0 |
| Hudspeth | 1 | 0 | 1 | 0 |
| Irion | 6 | 19 | 4 | 0 |
| Jones | 9 | 300 | 5 | 0 |
| Loving | 18 | 2,604 | 7 | 0 |
| Menard | 1 | 0 | 1 | 0 |
| Mitchell | 1 | 105 | 0 | 0 |
| Pecos | 46 | 2,105 | 16 | 0 |
| Reagan | 1 | 2,509 | 0 | 0 |
| Reeves | 3 | 0 | 3 | 0 |
| Runnels | 2 | 60 | 1 | 0 |
| Scurry | 3 | 10 | 2 | 0 |
| Taylor | 2 | 60 | 0 | 0 |
| Tom Green | 1 | 0 | 1 | 0 |
| Upton | 10 | 2,598 | 1 | 0 |
| Ward | 59 | 5,759 | 7 | 2 |
| Winkler | 4 | 1,067 | 2 | 0 |
| Total 1932 | 223 | 34,298 | 67 | 4 |

**Completions by Month**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| January | 11 | 1,866 | 3 | 0 |
| February | 8 | 852 | 2 | 0 |
| March | 13 | 1,377 | 6 | 0 |
| April | 13 | 835 | 9 | 1 |
| May | 23 | 2,640 | 6 | 0 |
| June | 22 | 1,773 | 8 | 1 |
| July | 31 | 6,042 | 6 | 0 |
| August | 19 | 3,895 | 3 | 0 |
| September | 20 | 3,456 | 4 | 0 |
| October | 23 | 4,526 | 8 | 0 |
| November | 16 | 5,083 | 4 | 0 |
| December | 24 | 2,953 | 8 | 2 |
| Total 1932 | 223 | 34,298 | 67 | 4 |
| Total 1931 | 321 | 53,884 | 148 | 3 |
| Difference | 98 | 19,586 | 81 | 1 |

| County— | Comp. | Prod. | Dry | Gas | Abd. |
|---|---|---|---|---|---|
| Auglaize | 2 | 5 | 1 | 0 | 8 |
| Sandusky | 5 | 40 | 3 | 0 | 57 |
| Mercer | 4 | 10 | 3 | 1 | 2 |
| Van Wert | 1 | 0 | 0 | 1 | 5 |
| Lucas | 8 | 95 | 2 | 0 | 7 |
| Ottawa | 0 | 0 | 0 | 0 | 8 |
| Seneca | 48 | 413 | 6 | 34 | 12 |
| Wyandot | 22 | 688 | 3 | 9 | 1 |
| Hardin | 9 | 59 | 1 | 2 | 0 |
| Shelby | 3 | 1 | 2 | 0 | 0 |
| Logan | 3 | 1 | 1 | 1 | 0 |
| Putnam | 3 | 0 | 1 | 1 | 0 |
| Darke | 2 | 1 | 0 | 1 | 0 |
| Total | 124 | 1,673 | 24 | 51 | 371 |

**CENTRAL OHIO**

**Summary of Wells Completed in 1932**

| Month— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| January | 45 | 266 | 9 | 24 | 12 |
| February | 35 | 160 | 14 | 17 | 4 |
| March | 39 | 155 | 17 | 13 | 9 |
| April | 29 | 68 | 8 | 17 | 4 |
| May | 29 | 112 | 8 | 15 | 6 |
| June | 21 | 107 | 7 | 8 | 6 |
| July | 40 | 234 | 11 | 9 | 20 |
| August | 26 | 213 | 9 | 8 | 9 |
| September | 42 | 424 | 18 | 15 | 5 |
| October | 36 | 141 | 12 | 18 | 6 |
| November | 32 | 67 | 4 | 20 | 8 |
| December | 32 | 171 | 7 | 21 | 4 |
| Total 1932 | 406 | 2,118 | 124 | 185 | 97 |
| Total 1931 | 574 | 2,999 | 161 | 296 | 118 |
| Difference | 168 | 881 | 37 | 110 | 21 |

**Summary by Counties**

| County— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| Ashland | 14 | 38 | 5 | 4 | 5 |
| Medina | 81 | 709 | 36 | 5 | 40 |
| Lorain | 21 | 0 | 6 | 15 | 0 |
| Wayne | 1 | 0 | 1 | 0 | 0 |
| Holmes | 9 | 54 | 0 | 3 | 6 |
| Cuyahoga | 3 | 6 | 1 | 1 | 1 |
| Richland | 4 | 0 | 4 | 0 | 0 |
| Knox | 2 | 0 | 2 | 0 | 0 |
| Coshocton | 13 | 558 | 1 | 3 | 9 |
| Summitt | 8 | 0 | 1 | 7 | 0 |
| Licking | 28 | 233 | 8 | 7 | 13 |
| Muskingum | 23 | 80 | 8 | 10 | 5 |
| Athens | 31 | 47 | 16 | 9 | 6 |
| Tuscarawas | 9 | 177 | 1 | 3 | 5 |
| Stark | 30 | 0 | 4 | 76 | 0 |
| Fairfield | 13 | 0 | 5 | 6 | 0 |
| Guernsey | 23 | 213 | 10 | 7 | 6 |
| Belmont | 33 | 0 | 8 | 25 | 0 |
| Carroll | 2 | 3 | 1 | 0 | 1 |
| Lawrence | 3 | 0 | 0 | 3 | 0 |
| Columbiana | 1 | 0 | 1 | 0 | 0 |
| Trumbull | 3 | 0 | 3 | 0 | 0 |
| Portage | 1 | 0 | 1 | 0 | 0 |
| Huron | 1 | 0 | 1 | 0 | 0 |
| Total | 406 | 2,118 | 124 | 185 | 97 |

**INDIANA FIELD**

**Summary of Wells Completed in 1932**

| Month— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| January | 17 | 180 | 5 | 9 | 3 |
| February | 11 | 155 | 6 | 3 | 2 |
| March | 10 | 240 | 7 | 1 | 2 |

(Continued on Next Page)

# Central West Field Had Unusually Quiet Year; Abandoned Many Old Wells

By GEORGE A. WHITNEY

The old Central West fields in Ohio, Indiana and Illinois were hit hard by the general depression in business and experienced a dull year in 1932. Even natural gas development work slacked up, and 137 fewer gas wells were completed than in 1931. In the Lima, Central Ohio, Indiana and Illinois Fields combined there were more dry holes than oil wells drilled. A total of 223 oil wells were completed, 296 gas wells were brought in, but the dry holes numbered 258. There were more old oil wells abandoned during the year than were replaced with new wells. In Lima, Indiana and Illinois 303 old wells were plugged while only 126 new oil wells were finished.

Southwestern Indiana is promised increased work this year following the opening of the new field in Vanderburg County. Oil produced in that field is being shipped through a new 20-mile pipe line to a loading rack from whence it is shipped by tank car to Louisville, Ky.

Following is a summary of the year's work in the four divisions:

**LIMA FIELD**

**Summary of Wells Completed in 1932**

| Month— | Comp. | Prod. | Dry | Gas | Old wells abd. |
|---|---|---|---|---|---|
| January | 6 | 18 | 1 | 3 | 32 |
| February | 8 | 7 | 2 | 3 | 47 |
| March | 10 | 110 | 2 | 4 | 20 |
| April | 6 | 215 | 0 | 3 | 31 |
| May | 15 | 57 | 5 | 6 | 30 |
| June | 11 | 212 | 1 | 5 | 24 |
| July | 10 | 66 | 2 | 3 | 25 |
| August | 8 | 15 | 2 | 3 | 21 |
| September | 13 | 122 | 1 | 8 | 15 |
| October | 13 | 372 | 3 | 4 | 15 |
| November | 14 | 432 | 2 | 5 | 8 |
| December | 10 | 52 | 2 | 3 | 3 |
| Total 1932 | 124 | 1,678 | 24 | 50 | 271 |
| Total 1931 | 148 | 940 | 24 | 90 | 725 |
| Difference | 24 | 738 | 0 | 40 | 457 |

**Summary by Counties**

| County— | Comp. | Prod. | Dry | Gas | Old wells abd. |
|---|---|---|---|---|---|
| Wood | 4 | 152 | 1 | 1 | 122 |
| Hancock | 5 | 175 | 1 | 0 | 36 |
| Allen | 6 | 38 | 0 | 0 | 13 |

## Central Texas

**Daily Average and Monthly Production of Crude Oil in 1932**

| | January (bbls.) | February (bbls.) | March (bbls.) | April (bbls.) | May (bbls.) | June (bbls.) | July (bbls.) | August (bbls.) | September (bbls.) | October (bbls.) | November (bbls.) | December (bbls.) | Ttl. 1932 (bbls.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWN COUNTY: | | | | | | | | | | | | | |
| Daily average | 2,542 | 2,629 | 2,716 | 2,673 | 2,860 | 2,811 | 2,633 | 2,440 | 2,507 | 2,512 | 2,616 | 2,664 | |
| Month | 78,802 | 76,241 | 84,196 | 80,190 | 88,660 | 84,330 | 81,623 | 75,640 | 75,210 | 77,872 | 78,480 | 82,584 | 963,828 |
| CALLAHAN COUNTY: | | | | | | | | | | | | | |
| Daily average | 1,216 | 1,156 | 1,200 | 1,192 | 1,212 | 1,283 | 1,749 | 1,891 | 1,942 | 2,254 | 2,411 | 2,357 | |
| Month | 37,696 | 33,524 | 37,200 | 35,760 | 37,572 | 38,490 | 54,219 | 58,621 | 58,260 | 69,874 | 72,330 | 73,067 | 606,613 |
| COLEMAN COUNTY: | | | | | | | | | | | | | |
| Daily average | 2,446 | 2,620 | 2,560 | 2,620 | 2,517 | 2,410 | 2,290 | 2,675 | 2,703 | 2,700 | 2,556 | 2,326 | |
| Month | 75,826 | 75,980 | 79,360 | 78,600 | 78,027 | 72,300 | 70,990 | 82,925 | 81,090 | 83,700 | 76,680 | 72,416 | 927,894 |
| COMANCHE COUNTY: | | | | | | | | | | | | | |
| Daily average | 67 | 73 | 72 | 71 | 69 | 71 | 68 | 70 | 68 | 70 | 69 | 66 | |
| Month | 2,077 | 2,117 | 2,232 | 2,130 | 2,139 | 2,130 | 2,108 | 2,170 | 2,040 | 2,170 | 2,070 | 2,046 | 25,429 |
| EASTLAND COUNTY: | | | | | | | | | | | | | |
| Daily average | 2,762 | 2,717 | 2,999 | 3,102 | 3,222 | 3,386 | 3,305 | 3,431 | 3,406 | 3,542 | 3,536 | 3,549 | |
| Month | 85,622 | 78,793 | 92,969 | 93,060 | 99,882 | 101,580 | 102,455 | 106,361 | 102,180 | 109,802 | 106,080 | 110,019 | 1,188,933 |
| ERATH COUNTY: | | | | | | | | | | | | | |
| Daily average | 149 | 146 | 159 | 154 | 151 | 155 | 152 | 149 | 147 | 146 | 142 | 139 | |
| Month | 4,619 | 4,234 | 4,929 | 4,620 | 4,681 | 4,650 | 4,713 | 4,619 | 4,410 | 4,526 | 4,260 | 4,309 | 54,569 |
| JACK COUNTY: | | | | | | | | | | | | | |
| Daily average | 1,664 | 1,727 | 1,457 | 1,610 | 1,588 | 1,612 | 1,563 | 1,510 | 1,503 | 1,496 | 1,487 | 1,440 | |
| Month | 51,584 | 50,083 | 45,167 | 48,300 | 49,228 | 48,360 | 48,453 | 46,810 | 45,090 | 46,376 | 44,610 | 44,640 | 568,701 |
| JONES COUNTY: | | | | | | | | | | | | | |
| Daily average | 1,083 | 1,035 | 1,132 | 1,077 | 1,062 | 1,054 | 1,275 | 1,501 | 1,117 | 1,147 | 1,238 | 1,317 | |
| Month | 33,573 | 30,015 | 35,092 | 32,310 | 32,958 | 31,620 | 39,525 | 46,531 | 33,510 | 35,557 | 37,140 | 40,827 | 428,653 |
| PALO PINTO COUNTY: | | | | | | | | | | | | | |
| Daily average | 315 | 299 | 287 | 376 | 360 | 376 | 472 | 409 | 461 | 388 | 391 | 412 | |
| Month | 9,765 | 8,671 | 8,897 | 11,280 | 11,160 | 11,280 | 14,662 | 12,679 | 13,830 | 12,028 | 11,730 | 12,772 | 138,755 |
| RUNNELLS COUNTY: | | | | | | | | | | | | | |
| Daily average | 49 | 58 | 53 | 55 | 52 | 55 | 54 | 51 | 52 | 51 | 51 | 50 | |
| Month | 1,519 | 1,682 | 1,643 | 1,650 | 1,612 | 1,650 | 1,674 | 1,581 | 1,560 | 1,581 | 1,530 | 1,550 | 19,232 |
| SHACKELFORD COUNTY: | | | | | | | | | | | | | |
| Daily average | 4,249 | 4,793 | 4,239 | 4,284 | 4,338 | 4,281 | 4,083 | 4,007 | 2,916 | 3,341 | 3,481 | 3,411 | |
| Month | 131,719 | 138,997 | 131,409 | 128,520 | 134,478 | 128,430 | 126,573 | 124,217 | 87,480 | 103,571 | 104,430 | 105,741 | 1,445,565 |
| STEPHENS COUNTY: | | | | | | | | | | | | | |
| Daily average | 3,662 | 3,820 | 3,903 | 3,690 | 3,847 | 3,849 | 3,866 | 3,626 | 3,760 | 3,715 | 3,796 | 4,009 | |
| Month | 113,522 | 110,780 | 120,993 | 110,700 | 119,257 | 115,470 | 119,846 | 112,406 | 112,800 | 115,165 | 113,880 | 124,279 | 1,389,098 |
| THROCKMORTON COUNTY: | | | | | | | | | | | | | |
| Daily average | 496 | 452 | 542 | 512 | 516 | 552 | 551 | 549 | 466 | 524 | 527 | 551 | |
| Month | 15,376 | 13,108 | 16,802 | 15,360 | 15,996 | 16,560 | 17,081 | 17,019 | 13,980 | 16,244 | 15,810 | 17,081 | 190,417 |
| HASKELL COUNTY: | | | | | | | | | | | | | |
| Daily average | 39 | 39 | 38 | 37 | 37 | 36 | 36 | 35 | 34 | 33 | 32 | 30 | |
| Month | 1,209 | 1,131 | 1,178 | 1,110 | 1,147 | 1,080 | 1,116 | 1,085 | 1,020 | 1,023 | 960 | 930 | 12,989 |
| TAYLOR COUNTY: | | | | | | | | | | | | | |
| Daily average | 39 | 38 | 131 | 117 | 119 | 117 | 115 | 114 | 113 | 114 | 109 | 107 | |
| Month | 1,209 | 1,102 | 4,061 | 3,510 | 3,689 | 3,510 | 3,565 | 3,534 | 3,390 | 3,534 | 3,270 | 3,317 | 37,691 |
| Daily average | 20,778 | 21,602 | 21,488 | 21,571 | 21,951 | 22,048 | 22,213 | 22,458 | 21,195 | 22,032 | 22,442 | 22,438 | 21,852 |
| Total 1932 | 644,118 | 626,458 | 666,128 | 647,130 | 680,481 | 661,440 | 688,603 | 696,198 | 635,850 | 683,022 | 673,260 | 695,578 | 7,998,267 |
| Total 1931 | 653,356 | 628,516 | 669,600 | 693,960 | 741,768 | 716,370 | 654,596 | 638,348 | 662,400 | 668,555 | 640,380 | 660,455 | 8,028,804 |
| Total 1930 | 1,336,689 | 1,197,784 | 1,253,702 | 1,320,510 | 1,318,176 | 1,172,640 | 1,104,220 | 1,102,980 | 1,014,210 | 952,610 | 885,210 | 890,078 | 13,348,208 |
| Total 1929 | 1,574,423 | 1,368,304 | 1,515,349 | 1,451,880 | 1,539,057 | 1,471,350 | 1,517,636 | 1,522,762 | 1,532,730 | 1,542,932 | 1,449,300 | 1,484,776 | 17,970,419 |
| Total 1928 | 1,402,754 | 1,281,096 | 1,465,029 | 1,422,150 | 1,477,119 | 1,473,111 | 1,520,247 | 1,502,756 | 1,582,050 | 1,447,882 | 1,463,700 | 1,568,259 | 17,736,103 |
| Total 1927 | 1,949,063 | 1,903,412 | 2,245,702 | 2,109,300 | 2,192,251 | 1,967,640 | 1,705,558 | 1,897,523 | 1,619,230 | 1,548,698 | 1,464,750 | 1,403,929 | 21,606,256 |

# Exports of 11 Refined Oil Products From Port of New York Dropped Very Seriously in 1932

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

Refiners and exporters shipping out of New York experienced another drastic decline in their export tonnage during the past year, the average decline for the 11 principal refined products amounting to 32.9 per cent, with the maximum reduction, that of products classified merely as "petroleum, refined," being 60 per cent and the smallest decline, on paraffin wax, being 11 per cent. The only product to show an increase last year over 1931 export totals was naphtha, which recorded an 18 per cent gain.

Numerous conditions contributed to the decline in New York exports for the year. The steady development of foreign bulk plants by major exporting companies has naturally reacted sharply against shipments of gasoline and kerosene into export channels in tins, and the gallonage formerly handled here in this manner has been largely replaced by bulk shipments out of the Gulf.

The continued growth in foreign refinery operations, coupled with intensified competition by Russia and Rumania in world oil consuming countries, has likewise been a factor in reducing the gallonage shipped abroad from this port, and the effects of these developments are expected to become even greater as more new refining plants are finished abroad.

The import duty, which became effective in June, likewise affected the local export situation somewhat, in that large companies which formerly exported refined products to some extent from New York harbor have been inclined to handle a greater part of this business from their foreign refineries.

The extent of the drastic declines in export shipments witnessed at New York during 1932 is shown in the following percentage tabulation, contrasting export volume for the year with that of 1931:

| Product— | Per cent change |
|---|---|
| Gasoline | —55 |
| Naphtha | +18 |
| Kerosene | —47 |
| Fuel and gas oil | —16 |
| Lubricating oil | —20 |
| Petroleum, refined | —60 |
| Petrolatum | —33 |
| Lubricating grease | —25 |
| Paraffin wax | —11 |
| Scale | —54 |
| Refined | —23 |

### East Texas Influence

The heavy flood of low-priced crude from the East Texas producing fields during the greater part of the year permitted refiners in the Southwest to drastically undersell the general market on export business, and the influence of this competition was especially apparent in the local export market for kerosene and gasoline.

With cheap crude still prevalent in the Southwest, not much improvement in the export situation, from the standpoint of East Coast refiners, is in sight for the near future.

### Cased Products

New York, formerly an exporting center for cased products, is rapidly losing this business in favor of bulk shipments to foreign consuming markets, and casing of the products at packaging plants maintained abroad by many American oil companies.

Russia has essayed to enter the cased gasoline and kerosene business in competition with American refiners to an increasing extent during the past year, and the results of this competition have also adversely affected gallonage handled locally, although Soviet competition in the cased goods market is a minor factor when considered in relation to the Soviet competition in world markets on bulk shipments.

### Tariff Barriers

There has been an increasing tendency on the part of many countries during the past year to increase their tariffs on petroleum imports, the higher duty rates taking in both bulk and package shipments, particularly the latter.

This trend, traceable directly to the high tariff walls erected by the United States itself, has resulted in sharply increasing the laid-down cost of American oil products abroad, particularly with regard to lub oil, gasoline and naphthas in containers.

While leading economists in many countries have been advocating a general readjustment of tariff schedules, with the aim of improving international trade, nothing concrete indicating any early action in that direction is discernible as yet.

### New Refineries Abroad

A number of important petroleum consuming countries, formerly drawing a large proportion of their refined products requirements from this country, have undertaken ambitious refinery construction programs, and the import records of these countries disclose a steady trend away from refined products imports to crude.

France has been especially active in this connection, while a number of other important consuming nations, including Germany, Italy and Japan, have also substantially increased their home refining facilities.

### Data on Exports

The sharp contraction which has been witnessed in the local export market during the past few years is illustrated in detail in the following comparative compilation of exports of principal refined petroleum products from the port of New York for the past four years:

EXPORTS OF REFINED PETROLEUM PRODUCTS FROM NEW YORK

| | 1932 | 1931 | 1930 | 1929 |
|---|---|---|---|---|
| | Gallons | | | |
| Gasoline | 4,623,000 | 10,299,000 | 16,781,000 | 22,915,150 |
| Naphtha | 17,883,000 | 15,119,000 | 36,797,000 | 55,473,800 |
| Kerosene | 2,555,000 | 4,872,000 | 10,184,000 | 15,356,000 |
| Fuel and gas oil | 5,829,000 | 6,940,000 | 5,386,000 | 6,618,600 |
| Lubricating oil | 63,836,000 | 79,836,000 | 95,999,000 | 92,392,500 |
| Petroleum, refined | 16,714,000 | 42,873,000 | 61,450,000 | 79,526,800 |
| | Pounds | | | |
| Petrolatum | 1,497,000 | 2,365,000 | 1,748,000 | 1,127,600 |
| Lubricating grease | 32,207,000 | 42,999,000 | 50,246,000 | 59,042,600 |
| Paraffin wax | 77,285,000 | 87,293,000 | 76,324,000 | 81,509,600 |
| Scale | 9,944,000 | 21,675,000 | 28,263,000 | 22,452,500 |
| Refined | 7,711,000 | 10,099,000 | 11,844,000 | 4,832,800 |

### Kerosene Exports

New York, formerly an important exporting center for kerosene, has now fallen off to such an extent that its exports of burning oil are now practically negligible.

Only 2,555,000 gallons were exported through the local port during the past year, a drop of almost 50 per cent for the year, and a reduction of some 11,000,000 gallons within a period of four years.

Russian and Rumanian kerosene have figured prominently in competition with the American oil in foreign consuming countries, notably in Europe and the Far East, where refiners in these two countries have substantially undersold the American market in recent years.

### Lub Oil Sales

Export sales of lubricating oils locally have held up better than the general run of refined petroleum products, this being due in large measure to the favorable reputations which have been established in world consuming markets by several of the leading brands of motor and industrial lubs produced by some of the leading East Coast refineries.

While world consumption of lub oil is believed to have shown a pronounced falling off during the past few years, it is apparent that foreign competition in lub oil sales is making itself felt in local export totals.

The 1932 exports of 63,836,000 gallons of lub oil from New York contrasted with a total of 95,999,000 gallons shipped out of this port in 1930, a drop of more than 32,000,000 gallons for the three-year period.

### Export Prices

Prices obtained on exports from the port of New York during 1932, in the main, compared rather favorably with those of the previous year, and in some instances the netback to refiners was better than was the case during 1931.

Continued depreciation in foreign currency, however, has been a factor in holding down purchases of American oil, and in instances where export business was taken on the basis of payment in foreign currency, the returns were not so favorable.

### Outlook for 1933

As exporters and refiners go into the new year, the outlook for any pronounced recovery in export business in this market does not appear to be overly bright.

Competitive conditions in world markets may be improved somewhat this year, as a result of the accord recently entered into by world oil companies and the Rumanian oil industry, and the apparent failure of the Soviet to step up its production and refining operations as per the ambitious schedule laid down for the oil industry of Russia, but other conditions are militating against American exporters.

More foreign refineries will be in operation this year than ever before, and operating under the protection of higher tariffs on refined products imports and with guarantees for the absorption of part of their output in some instances, these new plants will be able to undersell American export operators.

Aside from this factor, world economic conditions are improving but slowly, and it is expected that it will be several years yet before world petroleum consumption figures show any pronounced upturn.

Continued weakness in foreign currency, coupled with high import duties in many countries, will still work against American oil exporters, and the evident nationalistic tendencies in many countries to "patronize home industry" will likewise react against American oil products in foreign markets.

In case of several of the large American oil companies, the shifting of the petroleum supply situation does not mean an actual loss in gallonage, but involves merely bookkeeping changes. This applies to the companies which have anticipated the present trend away from American oil in foreign consuming countries, and have so altered their methods of world supply as to fall in with the changing times abroad, through the construction of refineries in important world consuming countries. In such cases, while the export gallonage of the parent companies will show a pronounced falling off, aggregate tonnage will be little, if any, affected in as much as the new foreign refining subsidiaries will not only continue to handle the regular business of the holding companies but may logically be expected to pick up some of the new business created through the virtual shutting off of imports from competitive companies which must still handle their foreign sales by shipments from refineries in the United States.

## Central West Fields Had An Unusually Quiet Year

(Continued from Preceding Page)

| | | | | | |
|---|---|---|---|---|---|
| April | 14 | 255 | 7 | 5 | 2 |
| May | 13 | 322 | 6 | 2 | 5 |
| June | 11 | 310 | 4 | 3 | 4 |
| July | 18 | 121 | 9 | 3 | 4 |
| August | 16 | 152 | 7 | 4 | 5 |
| September | 23 | 339 | 8 | 3 | 12 |
| October | 14 | 200 | 8 | 4 | 2 |
| November | 20 | 15 | 6 | 11 | 1 |
| December | 23 | 227 | 8 | 7 | 6 |
| Total 1932 | 190 | 2,516 | 81 | 55 | 54 |
| Total 1931 | 162 | 1,492 | 80 | 47 | 35 |
| Difference | 28 | 1,024 | 1 | 8 | 19 |

**Summary by Counties**

| County— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| Gibson | 30 | 1,210 | 7 | 14 | 9 |
| Pike | 27 | 285 | 8 | 12 | 7 |
| Huntington | 1 | 0 | 0 | 1 | 0 |
| Daviess | 7 | 55 | 4 | 2 | 1 |
| Spencer | 13 | 117 | 5 | 0 | 8 |
| Perry | 28 | 432 | 13 | 0 | 15 |
| Sullivan | 17 | 1 | 11 | 5 | 1 |
| Henry | 1 | 0 | 0 | 1 | 0 |
| Clay | 1 | 0 | 1 | 0 | 0 |
| Switzerland | 5 | 0 | 1 | 4 | 0 |
| Hancock | 8 | 0 | 1 | 7 | 0 |
| Hendricks | 2 | 0 | 2 | 0 | 0 |
| Knox | 5 | 12 | 3 | 1 | 1 |
| Shelby | 2 | 0 | 1 | 1 | 0 |
| Floyd | 1 | 0 | 1 | 0 | 0 |
| Franklin | 4 | 0 | 4 | 0 | 0 |
| Ripley | 2 | 0 | 2 | 0 | 0 |
| Laporte | 2 | 0 | 2 | 0 | 0 |
| Johnson | 2 | 0 | 0 | 2 | 0 |
| Rush | 2 | 0 | 0 | 2 | 0 |
| Dubois | 2 | 0 | 2 | 0 | 0 |
| Harrison | 1 | 0 | 1 | 0 | 0 |
| Fountain | 2 | 0 | 2 | 0 | 0 |
| Union | 1 | 0 | 1 | 0 | 0 |
| Crawford | 1 | 0 | 1 | 0 | 0 |
| Vigo | 2 | 0 | 2 | 0 | 0 |
| Jay | 1 | 0 | 0 | 1 | 0 |
| Warrick | 1 | 0 | 1 | 0 | 0 |
| Vanderburg | 13 | 404 | 0 | 1 | 12 |
| Monroe | 4 | 0 | 3 | 1 | 0 |
| Greene | 1 | 0 | 1 | 0 | 0 |
| Hamilton | 1 | 0 | 1 | 0 | 0 |
| Total | 190 | 2,516 | 81 | 55 | 54 |

**ILLINOIS FIELDS**

**Summary of Wells Completed in 1932**

| Month— | Comp. | Prod. | Dry | Gas | Old wells abd. |
|---|---|---|---|---|---|
| January | 6 | 3 | 3 | 1 | 26 |
| February | 2 | 10 | 1 | 0 | 13 |
| March | 3 | 15 | 1 | 1 | 4 |
| April | 4 | 0 | 4 | 0 | 57 |
| May | 2 | 22 | 0 | 0 | 19 |
| June | 0 | 0 | 0 | 0 | 12 |
| July | 7 | 16 | 4 | 1 | 10 |
| August | 3 | 1 | 1 | 1 | 5 |
| September | 10 | 0 | 9 | 1 | 5 |
| October | 5 | 5 | 3 | 1 | 21 |
| November | 1 | 7 | 0 | 0 | 5 |
| December | 4 | 2 | 3 | 0 | 18 |
| Total 1932 | 47 | 81 | 29 | 6 | 199 |
| Total 1931 | 39 | 107 | 25 | 1 | 210 |
| Difference | 8 | 26 | 4 | 5 | 11 |

**Summary by Counties**

| County— | Comp. | Prod. | Dry | Gas | Old wells abd. |
|---|---|---|---|---|---|
| Clark | 2 | 2 | 0 | 1 | 31 |
| Coles | 1 | 0 | 1 | 0 | 0 |
| Edgar | 1 | 0 | 1 | 0 | 0 |
| Crawford | 19 | 77 | 9 | 0 | 30 |
| Lawrence | 1 | 0 | 1 | 0 | 66 |
| St. Clair | 5 | 0 | 5 | 0 | 29 |
| Monroe | 3 | 0 | 3 | 0 | 0 |
| Bond | 4 | 0 | 1 | 2 | 0 |
| Wabash | 4 | 2 | 2 | 1 | 14 |
| Montgomery | 1 | 0 | 1 | 0 | 0 |
| Madison | 2 | 0 | 2 | 0 | 0 |
| Randolph | 3 | 0 | 2 | 1 | 0 |
| Washington | 1 | 0 | 1 | 0 | 0 |
| Marion | 0 | 0 | 0 | 0 | 9 |
| Total | 47 | 81 | 29 | 6 | 199 |

# Atlantic Coast Prices Were Higher Last Year for Light Products and Lower for Heavy Oils

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Jan. 23.—From the standpoint of prices, East Coast refiners had little to complain about on their major products during the past year, but judged from the viewpoint of gallonage, 1932 was an unfavorable year. In the markets for gasoline and kerosene, prices during the past year averaged higher than those for 1931, discounting the added 1 cent per gallon on gasoline prices during the closing half of the year, when the Federal excise tax was in effect. The top posted price on U. S. Motor during the year was 1¼ cents per gallon over the 1931 high. The top on kerosene for 1932 was on a par with the 1931 top, but the low for the year was one-quarter cent above that for the previous year, and the average return on kerosene sales during 1932 much greater than that for the previous year.

While the year's high on Bunker "C" and Diesel oils did not come up to the 1931 high levels, the market held fairly steady during the greater part of 1932 and did not go under the all-time lows which were recorded late in the previous year. An interesting feature in connection with the bunker oil market was seen in the fact that refiners have continued to import fairly large quantities of this oil, notwithstanding the import duty of 21 cents per barrel, which they have been absorbing themselves in domestic sales.

### Refinery Changes

Perhaps the outstanding feature of the year in East Coast refining circles was the pronounced trend toward high octane gasolines, necessitating considerable important refinery construction and "revamping" work at various plants during the year.

Although this refinery expansion assumed important proportions during 1932, it is evident that the program of refinery modernization in this area is by no means completed, with further developments in this direction hinging upon the continued improvement in the earning position of a number of the major companies.

In line with the increased production of high octane gasoline, the year witnessed a definite change in the pricing policies of refiners in connection with their gasoline sales, and the establishment of fixed differentials between high and low octane gasoline prices at refineries.

The development of a greater production of high octane gasoline was in turn responsible for two other major changes in the gasoline situation in this area. The first of these, rather serious in its effects upon earnings of refining and marketing companies, was the excessive stressing of the qualities of the new "regular" grades of gasoline which various refiners placed on the market during 1932. This tendency on the part of the refiners to accentuate the antiknock rating and other properties of their new motor fuels inevitably brought about a sharp contraction in sales of various blends of Ethyl Gasoline, and sales totals for the premium grade in many instances recorded declines of 50 per cent and over for the year.

Balancing this development to some extent, from the standpoint of the refiners, was the gradual lessening of sales pressure on "third grades," and while this grade was used to some extent to meet competitive selling in a few parts of the Atlantic Seaboard territory during 1932, its distribution was by no means as broad or as general as had been the case in the previous year.

The imposition of an import duty on crude and products late in June effectively shut out further imports of virtually all petroleum products, with the exception of crude petroleum and fuel oil. Importing companies "loaded up" heavily with gasoline in anticipation of the tariff and the shutting out of further imports of motor fuel has been accompanied by a sharp reduction in export shipments from this country, major refiners diverting their export business to refineries in the Caribbean area and in Mexico to some extent.

Taking advantage of a loophole in the hastily framed emergency revenue act of 1932, several independent marketers brought in cargoes of refined oil under the classification of "painters' naphtha" during the closing half of the year. Disclosure that these imports were going into distribution as motor fuel, with the addition of casinghead gasoline, aroused a storm of protest in domestic trade circles, with the result that the Treasury Department has now ruled that effective late this month an import levy of 2½ cents per gallon (the same rate applying to gasoline imports) will be made on receipts of foreign petroleum naphthas, in place of the former duty rate of one-half cent per gallon. Only imports which can be definitely shown to be intended for consumption as other than motor fuel will be exempted from the higher duty rate.

Leading East Coast refiners met the threat of imported "naphtha" in September by a sweeping reduction of 3¼ cents per gallon, net, in tank car gasoline prices at principal East Coast distributing points. This cut, it was generally understood, resulted in the cancellation of a number of additional cargoes of "painters' naphtha" which had been arranged for shipment here from Trinidad and Rumania.

### Intercoastal Shipments

Movement of California gasoline into the Eastern Seaboard territory was curtailed somewhat during the year, with the major integrated companies included to limit their takings from subsidiary or affiliated companies on the Pacific Coast in an effort to stabilize the surplus stock situation in this area.

Considerable gasoline moved up the coast from the Gulf, however, and the plentiful supply of this motor fuel was a constant threat against the stability of prices here. Independent East Texas refiners, with plentiful supplies of cheap distressed crude, were in position to undersell the general gasoline market throughout the greater part of the year, and distributors for these refiners found a ready outlet for their cargoes among the independent marketers in the Atlantic Coast area.

Toward the latter part of the year, however, Gulf Coast sellers showed more of an inclination to "play ball" with respect to prices, and the market was in fairly stable position during the closing quarter, although it has since again broken.

### Retail Markets

Perhaps the most important feature of the tank wagon gasoline situation during 1932 was the action of two of the major companies late in the year in instituting criminal proceedings against a number of retail station operators who had been selling so-called "bootleg" gas on the representation that this motor fuel was actually the product of the companies whose pumps and brands they were using.

Convictions and workhouse sentences were secured in several instances and it is indicated that marketing companies will extend their activities in these prosecutions as a means for the prevention of bootlegging in some of its more flagrant forms.

The Petroleum Industries Committee, organized at the annual meeting of the American Petroleum Institute, is also expected to work for a betterment in retail marketing conditions.

In the retail lub oil market, refiners experienced considerable difficulty, likewise caused by "bootlegging" in a new form. Stimulated by the Federal tax of 4 cents per gallon on lub oil sales, and the relatively high prices prevailing for featured brands of lubs, many retail station operators have started the practice of filtering and cleaning crankcase drainings and selling the resultant product as trade marked lub oil of leading brands. The industry is still cudgelling its brains for a method whereby this practice may be eliminated.

While local price cutting continued an important factor in the retail end of the business throughout 1932, the extent of this type of competition was perhaps less than has been the case in recent years.

REFINERY GASOLINE
(U. S. Motor)

| | Cents | |
|---|---|---|
| | High | Low |
| 1932 | 8¼ | 5¼ |
| 1931 | 7 | 5¼ |
| 1930 | 9 | 6¼ |
| 1929 | 11 | 8⅝ |
| 1928 | 11¾ | 8¼ |

Posted prices for U. S. Motor gasoline, under 65 octane number, were substantially higher during the past year than was the case in 1931, and running on cheap crude during a part of the year, refiners were able to show a more favorable return on operations. Sharp competition continued a feature of the tank car market, and several sharp breaks during the year were directly attributable to persistent underselling by one or more interests.

The drop in gasoline consumption in the Atlantic States was not as pronounced as that recorded in many other sections of the country, although aggregate gallonage for the year was somewhat under that for the previous year. Refiners consistently held down refinery operations, and were drawing against gasoline storage at times during the year. Notwithstanding this situation, surplus stocks of motor fuel were not reduced to the "safety level," and the market closed the year with the undertone still somewhat disturbed.

The new year has gotten under way with a general cut in tank car and tank wagon gasoline prices, and pending settlement of the proration situation, the market tone remains easy.

REFINERY GASOLINE
(U. S. Motor above 65 O.N.)

| | Cents | |
|---|---|---|
| | High | Low |
| 1932 | 8¾ | *5½ |

*This price represented contract quotation to regular buyers, who for a short period in the closing quarter of the year were granted a half-cent differential under the open market. This would make the year's low for actual open market posted quotations 6 cents.

Comparable figures for preceding years are not available, as East Coast refiners initiated sales on an octane basis in 1932.

East Coast refiners last year followed the trend in other refining centers, and established an open market on both ordinary U. S. Motor gasoline and the high octane product, by establishing a fixed differential between the two grades. This differential at present is one-quarter cent a gallon, although during the earlier part of 1932 a broader differential existed.

Most leading refiners in this area are now distributing only gasoline of 65 octane and above under their own featured brands, with the motor fuel of lower knock rating going out as competitive grade gasoline in distributing channels.

While some refiners have at times claimed that the octane number of their featured brands has run above 70 O.N., the average octane rating of these fuels, it is understood, does not average much above the 65 O.N. minimum.

DIESEL OIL

| | Barrel | |
|---|---|---|
| | High | Low |
| 1932 | $1.65 | $1.30 |
| 1931 | 1.85 | 1.30 |
| 1930 | 2.00 | 1.85 |
| 1929 | 2 00 | 2.00 |
| 1928 | 2.10 | 2 00 |

Diesel oil during 1932 recovered from the record low of $1.30 per barrel, reached during the previous year, and advanced to a top of $1.65 per barrel, which quotation was in effect at the close of the year. During the greater part of 1932, average netback on Diesel oil sales in this territory was greater than had been the case in the preceding year.

Depression in shipping circles tended to curtail domestic demand for Diesel oil slightly during the year, and export business was also affected by this situation, as well as by continued competition from Rumania and Russia.

Refiners were thrown in a quandary by the emergency revenue act of 1932, effective in June, imposing a tax of 1 cent per gallon on sales of "motor fuel" for the propulsion, among other things, of boats. In at least one instance, the law was interpreted as covering Diesel oil, and one major company at the Gulf for a short time charged, conditionally, an extra 42 cents per barrel to cover tax. Large eastern companies, however, took the position that this tax was not intended to cover bunkering sales of Diesel oil, and this viewpoint was sustained by an official Treasury Department ruling late in the year.

Indications point to an important increase in domestic Diesel oil sales during 1933, several outstanding industrial developments in this field being looked for.

BUNKER "C" OIL

| | Barrel | |
|---|---|---|
| | High | Low |
| 1932 | $0.85 | $0.60 |
| 1931 | 1.05 | .60 |
| 1930 | 1.15 | 1.05 |
| 1929 | 1.05 | 1.05 |
| 1928 | 1.35 | 1.05 |

Predictions heard in some quarters late in 1931 that bunker fuel oil would shatter all previous records and would hit 50 cents a barrel or under during 1932 failed of fulfillment, and the low for the year was 60 cents, the same as the previous year, with the market showing improvement early in the year. The top quotation for 1932 was 85 cents per barrel, but this quotation was in effect but a short time when the market eased off to 75 cents, closing the year at this figure.

Heavy imports featured the market during the second quarter, major companies bringing in considerable quantities in advance of the effective date of the import tariff of 21 cents a barrel. Contrary to expectations, the imposition of this duty failed to halt imports, and there has been a large and fairly regular import movement since the tax became effective, with the refiners absorbing the duty in their domestic sales.

Bunker oil tonnage was adversely affected during 1932 by slackness in shipping operations, and current depression

in many domestic consuming industries, likewise curtailed domestic sales of fuel oil. The outlook for 1933 is somewhat better in both fields, however, although the possibility of unrestricted production in East Texas is seen as a threat over maintenance of current price levels for heavy oils.

Rumania and Russia continued important factors in the fuel oil competitive situation abroad last year. The Soviet closed important contracts covering fuel oil deliveries to both France and Japan during the year.

GAS OIL

| | Cents | |
|---|---|---|
| | High | Low |
| 1932 | 4 | 3½ |
| 1931 | 4½ | 3½ |
| 1930 | 4⅝ | 4¼ |
| 1929 | 5¼ | 4⅝ |
| 1928 | 5¼ | 5¼ |

Gas oil continued under strong competition throughout the past year particularly in manufactured gas field where sharp competition for term contracts among refiners led to considerable price shading. While the lowest posted price for the year for 28 gravity plus oil was 3½ cents per gallon, it was reliably reported that some business had been taken at 3¼ cents in one or two instances.

California was in direct competition with East Coast refiners for utility business here during 1932, regular cargo shipments being made by a major California company to a Baltimore gas manufacturing utility during the year.

The trend toward the substitution of bunker oil for gas oil in the manufacture of gas by eastern utilities became more pronounced during 1930, and this development naturally reacted against aggregate gas oil gallonage for the area during the year. Further developments in this direction are anticipated.

In contrast with the four previous years, the average netback on gas oil sales by East Coast refiners during 1932 was low, but in view of lower crude costs, the price situation was not so unfavorable.

The steadily expanding consumption of domestic heating oil gives promise of a ready outlet for surplus production of gas oil in the forthcoming year.

### Red and Pale Oils

Gallonage in industrial lub oils was adversely affected last year by the slackness in many manufacturing lines, and business naturally fell off.

There was a heavy buying movement in progress just before mid-year, many manufacturers stocking their industrial lub oil requirements for the balance of the year in an effort to avoid payment of the excise tax of 4 cents per gallon, which became effective in late June.

Through co-operative action in aiding in the solution of plant lub oil problems, and the improvement of lub oil quality to meet new and changing needs of industry, refiners in this area during the past year made considerable progress in cementing their relations with their principal customers, and this naturally lessened competition from the price angle, quotations holding fairly stable throughout the year.

### Cylinder Oils

There was a sharp falling off in cylinder oil business in the local area during 1932, this being due to the steadily falling export demand for these oils.

Reflecting this curtailed buying, cylinder oil prices weakened considerably during closing half of the year and the market closed 1932 at price levels considerably under those in effect at the start of the year.

In the domestic market for cylinder oils there was a general lowering of posted prices for leading brands, with the industry suffering sharply in some sections of the country from lub oil bootlegging, and the substitution of oils.

An important development last year in the lub oil field was the perfection by Standard Oil Co. of New Jersey of a new type of lub oil, made at its hydrogenation plants at Bayway and Baton Rouge. This new hydrogenated lub was introduced nationally on a commercial scale during the year.

# Market Quotations on Oil Securities Closed 1932 at Prices Well Over Year's Lows

By A. E. MOCKLER

NEW YORK, Jan. 23.—While market prices for petroleum stocks suffered from the general financial depression during the year just ended, the securities of the leading companies listed on the New York Stock Exchange and New York Curb Exchange closed the year at levels well over the 1932 lows.

The most actively traded stocks during the past year was Standard of New Jersey, of which 4,264,606 shares were traded during 1932. Next in activity was Cities Service common, which witnessed a turnover of 3,603,184 shares during the year. Other stocks whose trading volume exceeded the million-share mark for the year included Socony-Vacuum, 2,514,155 shares; Consolidated Oil Corp., 2,148,780 shares; The Texas Corporation, 1,604,150 shares; Standard Oil Co. of California, 1,383,870 shares; Seaboard Oil, 1,499,425 shares; Atlantic Refining, 1,304,334 shares; Continental Oil, 1,208,463 shares, and Standard Oil Co. (Indiana), 1,460,958 shares.

### Big Companies Showed Firmness

While a number of the smaller oil companies received strong support in the stock market at various times during the year, consistent firmness was shown in most instances only by the stocks of the major integrated companies, particularly those companies which continued on a dividend basis. These oils were consistently supported on the basis of the belief that the petroleum industry would show the way toward general business recovery, and that the major companies would be the first to reflect improved earnings.

A compilation of the volume of trading of principal issues on the Stock and Curb exchanges, with the year's highs, lows and last prices, together with comparable highs and lows for 1931, are given in the accompanying tables.

During the past year the following oil securities were taken from the trading lists:

New York Stock Exchange—American Republics Corp.; Mexican Petroleum, preferred; Rio Grande Oil; Pan American Petroleum & Transport and Pan American Petroleum & Transport "B".

New York Curb Exchange—Allegheny Gas; Appalachian Gas; Cumberland Pipe Line; Duquesne Gas; Magdalena Syndicate; Missouri Kansas Pipe Line; New York Transit; Northern Pipe Line; Oil Stocks, Ltd., "A"; Pandem Oil; Plymouth Oil (now on the New York Stock Exchange); Union Oil Associates, and Y Oil & Gas.

### Prominent Mergers

The principal changes in corporation set-up during the year included the final consummation of the Sinclair-Prairie mergers, with the resultant formation of Consolidated Oil Corp.; physical consolidation of Socony and Vacuum; acquisition of Rio Grande Oil by Consolidated, and acceptance by creditors' committees of the Richfield Oil Corp. of California of the bid of Standard Oil Co. of California for the Richfield properties and business. A number of minor consolidations were also recorded during the year. Outright purchase by Standard Oil Co. (New Jersey) of Pan American's foreign properties was likewise a feature of 1932, as was the acquisition by Standard Oil Co. (Indiana) of the producing and refining properties of Standard of Kansas.

While recent crude price cuts have definitely slowed down the recovery of the oil industry, from the standpoint of earnings, the belief persists in financial quarters that the present low prices for crude and products are but temporary, and that the end of the first quarter of the new year will witness substantial progress toward higher prices and resultant improved earnings by the major companies.

Inventory readjustments at the year-end by oil companies, necessitated by the cuts in crude and products prices, have put the industry in a favorable position to take advantage of any price recovery, it is felt, and the marked economies in operating overhead achieved by most units in the industry have likewise tended to substantially brighten the earnings outlook.

### NEW YORK STOCK EXCHANGE

| 1931 High | 1931 Low | Stock— | 1932 Sales | 1932 High | 1932 Low | 1932 Last |
|---|---|---|---|---|---|---|
| 23 | 11¼ | Amerada | 123,600 | 22⅜ | 12 | 21½ |
| 31 | 8¾ | Associated Oil | 2,130 | 16½ | 6½ | 14¾ |
| 23⅝ | 8⅝ | Atlantic Refining | 1,304,334 | 21⅞ | 8⅝ | 16½ |
| 14½ | 4 | Barnsdall | 810,980 | 7 | 3⅜ | 4 |
| 10½ | 7½ | Colonial-Beacon | 23,400 | 12½ | 9 | 12 |
| 15⅞ | 4½ | Consolidated Oil | 2,148,780 | 9 | 4 | 5⅜ |
| 12 | 5 | Continental Oil | 1,208,463 | 9⅜ | 3⅝ | 6 |
| 47 | 9⅝ | General Asphalt | 228,300 | 15½ | 4⅜ | 7⅛ |
| 68½ | 15⅝ | Houston Oil | 450,650 | 28¼ | 8¾ | 13¼ |
| 14⅛ | 3 | Houston Oil, new | 304,100 | 5⅜ | 1⅝ | 2¾ |
| 4⅝ | 1⅛ | Indian Refining | 45,300 | 2¾ | 1 | 2 |
| 4½ | 1 | Louisiana Oil | 39,300 | 2¼ | ½ | ⅝ |
| 3¾ | ½ | Maracaibo Oil | 17,700 | 1½ | ⅜ | ½ |
| 16¾ | 5 | Mid-Continent Petroleum | 342,378 | 8⅞ | 3¾ | 4½ |
| 19½ | 5⅛ | Ohio Oil | 958,462 | 11 | 5 | 6⅞ |
| 16⅝ | 4 | Phillips Petroleum | 913,991 | 8⅛ | 2 | 4⅞ |
| 20⅜ | 4½ | Prairie Oil & Gas | 77,754 | 9½ | 3½ | 5¼ |
| 26½ | 5⅞ | Prairie Pipe Line | 209,950 | 12¼ | 5½ | 7½ |
| 11⅞ | 3¼ | Pure Oil | 338,950 | 6½ | 2⅞ | 3⅛ |
| 42⅝ | 13 | Royal Dutch N. Y. | 593,750 | 23¾ | 12⅛ | 20¼ |
| 20¾ | 5½ | Seaboard Oil | 1,499,425 | 20⅜ | 6⅝ | 20 |
| 10¼ | 2½ | Shell Union | 775,660 | 8¾ | 2½ | 5¼ |
| 11 | 3½ | Simms Petroleum | 214,200 | 7½ | 3¼ | 5⅝ |
| 12⅛ | 2 | Skelly Oil | 73,800 | 5¾ | 2½ | 3½ |
| 21 | 8⅜ | Socony-Vacuum | 2,514,155 | 12¼ | 5¼ | 7½ |
| 51¾ | 23⅛ | Standard Oil of California | 1,383,870 | 31⅞ | 15⅛ | 24½ |
| 19 | 7¾ | Standard Oil of Kansas | 114,400 | 16½ | 7 | 15⅜ |
| 52½ | 26 | Standard Oil of New Jersey | 4,264,606 | 37⅜ | 19⅞ | 30¼ |
| 45¼ | 26¾ | Sun Oil | 40,719 | 39⅞ | 24¾ | 36½ |
| 36¼ | 9⅞ | The Texas Corporation | 1,604,150 | 18¼ | 9¼ | 14½ |
| 9 | 2⅛ | Tide Water Associated | 728,931 | 5⅝ | 2 | 3⅜ |
| 26⅝ | 11 | Union Oil of California | 280,610 | 15⅜ | 8 | 9¾ |
| 9⅜ | 2¾ | Wilcox Oil & Gas | 297,900 | 8¼ | 2¾ | 2¾ |

### NEW YORK CURB EXCHANGE

| | | | | | | |
|---|---|---|---|---|---|---|
| 1¾ | ¼ | American Maracaibo | 240,300 | ⅝ | ⅛ | ⅛ |
| 6¾ | 1⅞ | Arkansas Natural Gas A | 324,500 | 3¾ | ⅝ | 1⅝ |
| 16 | 6 | Borne Scrymser | 2,400 | 7 | 6 | 6½ |
| 56 | 30 | Buckeye Pipe Line | 8,180 | 35 | 17½ | 24 |
| 2⅜ | ⅛ | Carib Syndicate | 44,900 | ⅜ | ⅛ | ⅛ |
| 20¾ | 5 | Cities Service | 3,603,184 | 6⅞ | 1¼ | 2⅝ |
| 3⅛ | ¼ | Colon Oil | 35,600 | 1¼ | ¼ | ¼ |
| 3¾ | ⅝ | Cosden Oil | 26,117 | 2⅞ | ⅛ | 1½ |
| 3⅞ | 1⅝ | Creole Petroleum | 16,800 | 3⅛ | 1⅜ | 2⅝ |
| 5 | 1⅜ | Darby Petroleum | 15,000 | 7⅛ | 1⅝ | 2⅞ |
| 6 | 1½ | Derby Oil & Refining | 15,200 | 3 | 1 | 1½ |
| 36 | 19 | Eureka Pipe Line | 4,150 | 35 | 18 | 24 |
| 75½ | 25⅜ | Gulf Oil | 286,707 | 44⅜ | 23 | 27 |
| 72 | 44¼ | Humble Oil & Refining | 74,860 | 55 | 35⅝ | 45 |
| 18¼ | 17⅜ | Imperial Oil | 230,800 | 10⅞ | 6¼ | 7⅞ |
| ⅝ | ⅛ | Intercont. Petroleum | 198,300 | ¼ | 1/16 | 1/16 |
| 15½ | 7⅜ | International Petroleum | 408,800 | 12¼ | 8 | 10½ |
| 1⅞ | ¼ | Kirby Petroleum | 13,000 | 1 | ⅜ | ⅝ |
| 1½ | ¼ | Leonard Oil | 45,200 | ⅜ | ⅛ | 1/16 |
| 6⅜ | 1½ | Lion Oil & Refining | 6,315 | 3½ | ⅞ | 2 |
| 25 | 5½ | Lone Star Gas | 171,100 | 11 | 3⅜ | 6⅞ |
| 2 | ½ | Louisiana Land & Exploration | 210,100 | 2½ | ½ | ¾ |
| 5 | 1⅞ | Margay Oil | 5,200 | 8 | 3¾ | 7¾ |
| 4⅞ | 1½ | Mexico-Ohio Oil | 17,525 | 3⅜ | 1½ | 1½ |
| 5⅞ | 2 | Mountain Producers | 55,400 | 4¾ | 2⅛ | 3⅜ |
| 26½ | 9¾ | National Fuel Gas | 86,200 | 14⅝ | 8 | 12⅝ |
| 17½ | 5 | National Transit | 18,500 | 10½ | 6 | 7 |
| 1½ | ½ | New Bradford Oil | 18,635 | ⅞ | ⅜ | ½ |
| 3 | ¾ | New Mexico & Arizona | 30,229 | 1¼ | ⅜ | 1 |
| 3¼ | ⅝ | North Central Texas | 11,968 | 1½ | ⅝ | ¾ |
| 2⅛ | ¼ | North European Oil | 51,200 | ⅜ | 1/16 | 1/16 |
| 15 | 2⅞ | Pacific Western | 38,400 | 8 | 3 | 3 |
| 2 | ⅜ | Pantapec | 21,700 | ⅝ | 1/16 | ⅛ |
| 3⅛ | ¼ | Reiter-Foster | 23,300 | ½ | 1/16 | 1/16 |
| 1⅜ | ⅛ | Salt Creek Cons. | 9,083 | ⅞ | ⅛ | ½ |
| 7¾ | 2¾ | Salt Creek Prod. | 54,972 | 5½ | 2⅞ | 3⅝ |
| 17 | 7 | Southern Pipe Line | 3,900 | 10 | 3¾ | 3¾ |
| 38½ | 13½ | Standard Oil (Indiana) | 1,460,958 | 25⅛ | 13⅛ | 21¾ |
| 23⅝ | 12⅛ | Standard Oil of Kentucky | 203,775 | 15⅞ | 8⅞ | 11 |
| 36½ | 16 | Standard Oil of Nebraska | 7,000 | 19 | 10¼ | 13½ |
| 62½ | 23 | Standard Oil of Ohio | 28,745 | 30¼ | 15½ | 20 |
| 5¼ | ¼ | Sunray Oil | 77,269 | ⅝ | ¼ | ¼ |
| 12⅞ | 2½ | Texon | 33,700 | 10½ | 4½ | 7½ |
| 1⅞ | ¼ | Venezuelan Pet. | 74,300 | 1/16 | ⅛ | 1/16 |

# Summary of Changes in Crude Oil Prices During Year 1932

### OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL AND SOUTHWEST TEXAS

| | Jan. 1[1] | Apr. 1[2] | Oct. 16[3] | Dec. 15[4] | Dec. 15[5] |
|---|---|---|---|---|---|
| Below 25 | .... | .... | .... | .... | .45 | .65 |
| 25 to 25.9 | .... | .... | .... | .... | .47 | .65 |
| 26 to 26.9 | .... | .... | .... | .... | .49 | .65 |
| 27 to 27.9 | .... | .... | .... | .... | .51 | .65 |
| 28 to 28.9 | .... | .... | .... | .... | .53 | .65 |
| Below 29 | .61 | .76 | .88 | .... | .... | .... |
| 29 to 29.9 | .63 | .78 | .90 | .55 | .68 | .... |
| 30 to 30.9 | .65 | .80 | .92 | .57 | .70 | .... |
| 31 to 31.9 | .67 | .82 | .94 | .59 | .73 | .... |
| 32 to 32.9 | .69 | .84 | .96 | .61 | .76 | .... |
| 33 to 33.9 | .71 | .86 | .98 | .63 | .79 | .... |
| 34 to 34.9 | .73 | .88 | 1.00 | .65 | .83 | .... |
| 35 to 35.9 | .75 | .90 | 1.02 | .67 | .85 | .... |
| 36 to 36.9 | .77 | .92 | 1.04 | .69 | .88 | .... |
| 37 to 37.9 | .79 | .94 | 1.06 | .71 | .91 | .... |
| 38 to 38.9 | .81 | .96 | 1.08 | .73 | .94 | .... |
| 39 to 39.9 | .83 | .98 | 1.10 | .75 | .97 | .... |
| 40 and above | .85 | 1.00 | 1.12 | .77 | 1.00 | .... |

Posted by Stanolind Crude Oil Purchasing Co., The Texas Company, Continental Oil Co. and Sinclair Crude Oil Purchasing Co., includes Oklahoma, Kansas and North Texas. Magnolia Petroleum Co. includes Oklahoma, Kansas, North Texas, Panola County in East Texas, Lytton Springs and Somerset in Southwest Texas. Humble Oil & Refining Co. includes North Texas, Ranger, Mexia, Powell, Richland, Wortham, Currie, Moran, Necona, Lytton Springs and Corsicana light. Postings by Carter Oil Co. and Gypsy Oil Co. include Oklahoma and Kansas.

[2]The Magnolia Petroleum Co. was paying flat prices January 1 as follows: North and North Central Texas, which includes only Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden, 83 cents; Central Texas, which includes only Mexia, Wortham, Corsicana light, Panola County and Lytton Springs, 79 cents; East Texas district, 83 cents; West Texas, which includes Winkler, Crane, Upton, Howard, Glasscock and Mitchell Counties, 50 cents; Panhandle district of Texas; Gray County, 73 cents; Carson and Hutchinson Counties, 66 cents; Southwest Texas; Mirando, 75 cents; Darst Creek, 60 cents; Corsicana heavy and Luling, 49 cents. Oklahoma: Cushing, Yale, Oklahoma City, Morrison, Wewoka, Seminole, 83 cents; Cement, Duncan and Walters, 75 cents; Hewitt and Graham, 67 cents; Healdton, 52 cents. On January 8 the Magnolia adopted the regular gravity price schedule except below 28 gravity, 52 cents.

[3]Posted April 1 by Continental Oil Co. and Magnolia Petroleum Co., met by Stanolind Crude Oil Purchasing Co., Gypsy Oil Co., Carter Oil Co. and other major buyers.

[4]Effective October 15, in Kansas, Oklahoma, North Texas, East Central Texas and Central Texas by Sinclair Prairie Oil Marketing Co.; in Oklahoma, North Texas, East Central Texas and Central Texas by Magnolia Petroleum Co. (Magnolia's schedule begins below 28 degrees, 79 cents; 28-28.9 degrees, 88 cents, with 2 cents added for each degree upward to 40 and over at $1.12); in Kansas, Oklahoma and North Texas by Continental Oil Co.; in Oklahoma and North and Central Texas by The Texas Company; in Kansas and Oklahoma by Standish Oil Co., Empire Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Gypsy Oil Co., National Refining Co.; in Oklahoma by Barnsdall Refineries, Inc., Deep Rock Oil & Refining Co., Producers Oil Co.; in North and Central Texas by the Gulf Pipe Line Co.; in Kansas by the Skelly Oil Co., Vickers Refining Co., White Eagle Oil Corp., Kanotex Refining Co.

[5]Effective December 15, in Kansas, Oklahoma, North Texas, East Central Texas and Central Texas by Sinclair Prairie Oil Marketing Co.; The Texas Company, effective December 20; in Kansas, Oklahoma and North Texas by Continental Oil Co., effective December 15; in Kansas and Oklahoma by Philtex Oil Co., Empire Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., December 15; Gypsy Oil Co., December 19; National Refining Co., December 16; in Oklahoma by Champlin Refining Co., effective December 16; in North and Central Texas by the Gulf Pipe Line Co., December 17; in Kansas by the Skelly Oil Co. and White Eagle Oil Corp., Kansas, Oklahoma and North Central Texas by the Stanolind Crude Oil Purchasing Co., December 16; in Kansas and Oklahoma by Carter Oil Co., December 16; in East Central, Central and North Texas by the Humble Oil & Refining Co., December 15.

[6]Effective December 16, in Oklahoma, North Texas, East Central Texas and Central Texas by Magnolia Petroleum Co. only.

### EAST TEXAS

| | Jan. 1 | Apr. 1 | Oct. 15[1] | Dec. 16 |
|---|---|---|---|---|
| Below 29 degrees | .61 | .98 | 1.10 | .75 |
| 29 to 29.9 | .63 | .98 | 1.10 | .75 |
| 30 to 30.9 | .65 | .98 | 1.10 | .75 |
| 31 to 31.9 | .67 | .98 | 1.10 | .75 |
| 32 to 32.9 | .69 | .98 | 1.10 | .75 |
| 33 to 33.9 | .71 | .98 | 1.10 | .75 |
| 34 to 34.9 | .73 | .98 | 1.10 | .75 |
| 35 to 35.9 | .75 | .98 | 1.10 | .75 |
| 36 to 36.9 | .77 | .98 | 1.10 | .75 |
| 37 to 37.9 | .79 | .98 | 1.10 | .75 |
| 38 to 38.9 | .81 | .98 | 1.10 | .75 |
| 39 to 39.9 | .83 | .98 | 1.10 | .75 |
| 40 and over | .85 | .98 | 1.10 | .75 |

Posted by Panola Pipe Line Co., Magnolia Petroleum Co., Sinclair Refining Co., Gulf Pipe Line Co. and The Texas Company, and posted by Humble on October 1.

[1]Posted by Sun Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Panola Pipe Line Co., The Texas Company, Gulf Pipe Line Co., Toronto Pipe Line Co.

### SOUTH CENTRAL AND SOUTHWESTERN TEXAS

| | Jan. 1 | Apr. 1[1] | Apr. 11 | Oct. 15 | Nov. 21 | Dec. 16 |
|---|---|---|---|---|---|---|
| Luling | .49 | .64 | .... | .... | .... | .60 |
| Mirando | .75 | .90 | .... | .... | .70 | .55 |
| Corsicana, heavy | .49 | .64 | .... | .74 | .... | .60 |
| Salt Flat | .60 | .... | .75 | .... | .... | .60 |
| Pettus | .85 | .... | 1.00 | .... | .... | *.80 |
| Darst Creek | .60 | .75 | .. | .... | .... | *.80 |
| Dobrowlski | Same as Mid Continent gravity table | | | | | |
| Lytton Springs | Same as Mid-Continent gravity table | | | | | |
| Somerset | Same as Mid-Continent gravity table | | | | | |

Note—Luling and Corsicana heavy posted by the Magnolia Petroleum Co. and Grayburg Pipe Line Co. Mirando (Webb, Jim Hogg and Zapata Counties) by Texpata Pipe Line Co., Magnolia Pipe Line Co., Humble Oil & Refining Co. and Crown Central Pipe Line Co. Somerset posted by Grayburg Pipe Line Co.

[1]Posted by Magnolia April 1, met by other buyers April 11, except Humble posted 80 cents for Mirando on that date and 70 cents on November 21.

*December 15.

Thrall (same as North Texas gravity scale less 19½ cents freight charge).

### WEST TEXAS

| | Jan. 1 | Apr. 1[1] | Dec. 16[2] |
|---|---|---|---|
| Crane, Upton, Ector, Crockett, Howard, Glasscock, Mitchell, Pecos and Winkler, Tex., crudes | .50 | .65 | .50 |

[1]Effective April 1 as posted by Magnolia Petroleum Co. and The Texas Company. Humble Oil & Refining Co., Gulf Pipe Line Co. and other buyers met price April 11.

[2]Effective December 16, 1932, Humble Oil & Refining Co., Gulf Petroleum Co. (Dec. 19), The Texas Company (Dec. 15), and Stanolind Oil & Gas Co., 50 cents.

Iatan and Westbrook—Same as North Texas gravity table.

### MEXICAN CRUDES

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Panuco heavy, f.o.b. Tampico | .45 | .45 | .47 | .47 | .47 | .47 | .45 | .45 | .42 | .42 | .45 | .45 |

Note—Prices based on transactions for previous month.

### EASTERN STATES

| | Jan. 1 | Feb. 26 | Mar. 1 | Mar. 14 | Apr. 12 | Apr. 25 | Apr. 26 | Oct. 3 |
|---|---|---|---|---|---|---|---|---|
| Pennsylvania grade oil in National Transit Lines (Pa.) | 1.85 | .... | .... | 1.82 | .... | 2.02 | .... | 1.72 |
| Pennsylvania grade oil in Southwest Pennsylvania Lines (W. Va.) | 1.55 | .... | .... | .... | .... | 1.75 | .... | 1.42 |
| Pennsylvania grade oil in Eureka Lines (Pa.) | 1.45 | 1.50 | .... | .... | .... | 1.70 | .... | 1.37 |
| Pennsylvania grade oil in Buckeye Lines (Ohio) | 1.25 | .... | 1.30 | *1.35 | .... | 1.55 | .... | 1.22 |
| Corning grade oil in Buckeye Lines (Ohio) 25-cent grade | .85 | .... | .... | .... | .95 | .... | 1.05 | .85 |
| Cabin Creek, W. Va. | 1.45 | .... | .... | .... | .... | 1 70 | .... | 1.37 |
| Bradford Hollow, W. Va. | 1.45 | .... | .... | .... | .... | 1.70 | .... | 1.37 |
| Ragland grade oil in Cumberland Lines (Ky.) | .60 | .... | .... | .... | .... | .... | .... | .... |
| Bradford district (Tide Water Pipe Line Co.) | 1.85 | .... | .... | 1.82 | .... | 2 02 | .... | 1.72 |
| Allegany district (Tide Water Pipe Line Co.) | 1.85 | .... | .... | 1.82 | .... | 2.02 | .... | 1.72 |

*March 12.

Posted by Joseph Seep Purchasing Agency except in Bradford and Allegany Field where postings are made by Tide Water Pipe Line Co.

### MIDDLE WESTERN STATES

| | Jan. 1 | Jan. 18 | Apr. 11 | Apr. 16 | May 17 | June 10 | June 30 | July 13 | Dec 16 |
|---|---|---|---|---|---|---|---|---|---|
| Lima | 1.00 | .... | 1.15 | .... | .... | .... | .... | .... | 1.00 |
| Wooster | 1.15 | .... | 1.20 | .... | .... | .... | .... | .... | .95 |
| Illinois | .95 | .... | 1.10 | .... | .... | .... | .... | .... | .87 |
| Indiana | .60 | .... | .75 | .... | .... | .... | .... | .... | .52 |
| Princeton | .95 | .... | 1.10 | .... | .... | .... | .... | .... | .87 |
| Western Kentucky | .90 | .... | 1.05 | .... | .... | .... | .... | .... | .82 |
| Posted by Ohio Oil Co. | | | | | | | | | |
| Midland | .55 | .... | .... | .... | .65 | .... | .75 | .85 | .... |
| Posted by Pure Oil Co. | | | | | | | | | |
| Oil City (Ky.) | .75 | .60 | .... | .85 | .... | 1.00 | .... | .... | ‡.85 |
| Posted by Stoll Oil Ref. Co. | | | | | | | | | |
| Somerset, Ky. | .80 | .... | .... | *.85 | .... | .... | .... | .... | †.65 |
| Posted by Ashland Refining Co. | | | | | | | | | |

*April 25. †December 19. ‡December 21.

### GULF COAST

**Gulf Coast Grade B, Refugio Light and Lockport**

| | Jan. 1 | Apr. 1[1] | Oct. 15[2] | Dec. 15[3] |
|---|---|---|---|---|
| Below 20 | .... | .... | .... | .58 |
| 20 to 20.9 | .... | .... | .... | .60 |
| 21 to 21.9 | .... | .... | .... | .62 |
| 22 to 22.9 | .... | .... | .... | .64 |
| 23 to 23.9 | .... | .... | .... | .66 |
| 24 to 24.9 | .... | .... | .... | .68 |
| Below 25 | .70 | .80 | .90 | .... |
| 25 to 25.9 | .71 | .81 | .91 | .70 |
| 26 to 26.9 | .72 | .82 | .92 | .72 |
| 27 to 27.9 | .73 | .83 | .93 | .74 |
| 28 to 28.9 | .74 | .84 | .94 | .76 |
| 29 to 29.9 | .75 | .85 | .95 | .78 |
| 30 to 30.9 | .76 | .86 | .96 | .80 |
| 31 to 31.9 | .77 | .87 | .97 | .82 |
| 32 to 32.9 | .78 | .88 | .98 | .84 |
| 33 to 33.9 | .79 | .89 | .99 | .86 |
| 34 to 34.9 | .80 | .90 | 1.00 | .88 |
| 35 to 35.9 | .81 | .91 | 1.01 | .... |
| 36 to 36.9 | .82 | .92 | 1.02 | .... |
| 37 to 37.9 | .83 | .94 | 1.04 | .... |
| 38 to 38.9 | .84 | .96 | 1.06 | .... |
| 39 to 39.9 | .85 | .98 | 1.08 | .... |
| 40 and above | .86 | 1.00 | 1.10 | .... |

[1]The Texas Company April 1, Humble Oil & Refining Co. and Gulf Pipe Line Co. April 11.

[2]Effective October 15, Sun Oil Co., Sinclair Prairie Oil Co., The Texas Company, Gulf Pipe Line Co., Pure Oil Co., Magnolia Petroleum Co. (in Lockport and Iowa Pools). Effective November 21 the Humble Oil & Refining Co. revised its Gulf Coast and Refugio price schedule on the lower grades as follows: Below 20 degrees, 60 cents; 20 to 24.9 degrees, 70 cents. The company has been paying 80 cents for all oil below 25 degrees in gravity.

[3]Effective December 15, by Humble Oil & Refining Co. in Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge and Refugio light oil. Sinclair Prairie Oil Marketing Co. in Boling, Barbers Hill and West Columbia, December 15.

Jennings and Sorrento—Posted by Gulf Refining Co. of Louisiana January 1, 65 cents; April 11, 75 cents; December 19, 60 cents.

High Island—Posted by Gulf Pipe Line Co. January 1, 65 cents; after April 11 same as gravity table above.

Markham—Posted by The Texas Company January 1, 67 cents; after April 11 same as gravity table above.

Refugio heavy—Posted by Humble Oil & Refining Co. January 1, 75 cents; April 11, 80 cents; December 15, 65 cents.

Conroe—Posted by Humble July 18; 35-35.9 gravity 90 with 2-cent differential each degree to 40 and above at $1 and on December 15 as follows: 35-35.9 gravity 80 cents with 2-cent differential per degree, making 40 gravity and above 90 cents.

### CANADIAN FIELDS

| | Jan. 1 | Apr. 22 |
|---|---|---|
| Oil Springs | 1 97 | .... |
| Petrolia | 1.90 | .... |
| Turner Valley | | |
| 40-44.9 | 2.08 | 1.56 |
| 45-49.9 | 2.08 | 2.18 |
| 50 and above | 2.65 | 2.80 |

Posted by Imperial Oil Co., Ltd., and Regal Oil Co.

### ARKANSAS-NORTH LOUISIANA

Caddo, Bull Bayou, Cotton Valley, Sarepta-Carterville, Rainbow, Crichton, DeSoto, Haynesville, Homer (La.), and El Dorado, Ark.—

| Gravity— | Jan. 1 | Apr. 1[1] | Oct. 15[2] | Dec. 16[3] | Dec. 16[4] |
|---|---|---|---|---|---|
| Below 25 deg. | .... | .68 | .80 | .39 | .58 |
| 25 to 25.9 | .... | .70 | .82 | .41 | .60 |
| 26 to 26.9 | .... | .72 | .84 | .43 | .62 |
| 27 to 27.9 | .... | .74 | .86 | .45 | .64 |
| 28 to 28.9 | .61 | .76 | .88 | .47 | .66 |
| 29 to 29.9 | .63 | .78 | .90 | .49 | .68 |
| 30 to 30.9 | .65 | .80 | .92 | .51 | .70 |
| 31 to 31.9 | .67 | .82 | .94 | .53 | .72 |
| 32 to 32.9 | .69 | .84 | .96 | .55 | .74 |
| 33 to 33.9 | .71 | .86 | .98 | .57 | .76 |
| 34 to 34.9 | .73 | .88 | 1 00 | .59 | .78 |
| 35 to 35.9 | .75 | .90 | 1.02 | .61 | .80 |
| 36 to 36.9 | .77 | .92 | 1.04 | .63 | .82 |
| 37 to 37.9 | .79 | .94 | 1 06 | .65 | .84 |
| 38 to 38.9 | .81 | .96 | 1.08 | .67 | .86 |
| 39 to 39.9 | .83 | .98 | 1.10 | .69 | .88 |
| 40 and above | .85 | 1.00 | 1.12 | .71 | .90 |

Posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co., to include Pine Island in (Caddo), Haynesville, Bull Bayou and El Dorado, Standard Oil Co. of Louisiana; Gulf Refining Co., all fields; Atlantic Oil Producing Co., in Homer, Haynesville and West El Dorado; The Texas Company in Caddo, Bull Bayou and Crichton; Louisiana Oil Refining Corp., all fields.

[1]Posted by The Texas Company and Magnolia Petroleum Co. April 1, met by other major buyers April 11.

[2]Effective October 15, by The Texas Company, Louisiana Oil Refining Co., and Magnolia Petroleum Co., as per schedule above and Gulf Refining Co., whose schedule begins at below 29 gravity, 88 cents.

[3]Effective December 16, by The Texas Company, Louisiana Oil Refining Co. and Standard Oil Co. of Louisiana, as per schedule above and Gulf Refining Co., December 17.

[4]Effective December 16, Magnolia Petroleum Co. only.

| | Jan. 1 | Apr. 12 |
|---|---|---|
| Stephens— | | |
| Below 28.9 | .41 | .61 |
| 29 and above | .44 | .64 |

Posted by Atlantic Oil Refining Co. and Louisiana Oil Refining Corp.

| | Jan. 1 | Apr. 1[1] | Dec. 16 |
|---|---|---|---|
| Smackover | .55 | .65 | .50 |

Posted by Standard Oil Co., The Texas Company, Gulf Refining Co., The Texas Producing Co., Louisiana Oil Refining Corp. and Magnolia Petroleum Co.

[1]By Magnolia, met by Standard of Louisiana and other buyers April 11.

| | Jan. 1 | Apr. 12 | Oct. 15 | Dec. 16 | Dec. 21 |
|---|---|---|---|---|---|
| Urania | .50 | .60 | .70 | .... | .55 |
| East El Dorado (Calion) | .52 | .65 | .75 | .65 | .... |

Cotton Valley—Posted by Standard Oil Co. of Louisiana, Magnolia Petroleum Co. and Louisiana Oil Refining Corp.

East El Dorado—Posted by Gulf Refining Co.

### ROCKY MOUNTAIN FIELDS

| | Jan. 1 | Apr. 11 | June 1 | Dec. 16 |
|---|---|---|---|---|
| Salt Creek-LaBarge— | | | | |
| Below 29 grav. | .61 | .76 | .... | .53 |
| 29 to 29.9 | .63 | .78 | .... | .55 |
| 30 to 30.9 | .65 | .80 | .... | .57 |
| 31 to 31.9 | .67 | .82 | .... | .59 |
| 32 to 32.9 | .69 | .84 | .... | .61 |
| 33 to 33.9 | .71 | .86 | .... | .63 |
| 34 to 34.9 | .73 | .88 | .... | .65 |
| 35 to 35.9 | .75 | .90 | .... | .67 |
| 36 to 36.9 | .77 | .94 | .... | .69 |
| 37 and above | .79 | .94 | .... | .... |
| 37 to 37.9 | .... | .... | .... | .71 |
| 38 to 38.9 | .... | .... | .... | .73 |
| 39 to 39.9 | .... | .... | .... | .75 |
| 40 and above | .... | .... | .... | .77 |
| Greasewood (Colo.) | .... | 1.00 | .... | .... |
| Rock Creek (Wyo.) | .85 | 1.00 | .90 | .67 |
| Big Muddy | .83 | .98 | .... | .75 |
| Grass Creek, light | .90 | 1.20 | 1.10 | .87 |
| Grass Creek, heavy | .62 | .... | .... | .45 |
| Fort Collins | .35 | .86 | .... | .... |
| Elk Basin | .90 | 1.20 | 1.10 | .87 |
| Lance Creek | 1.05 | 1.15 | .... | .92 |
| Poison Spider | .70 | .... | .... | .... |
| Rex Lake | 1.10 | .... | .... | .... |
| Cat Creek (Mont.) | .90 | 1.20 | .... | .87 |
| Sunburst | 1.00 | 1.05 | .... | †.75 |
| Artesia (N. Mex.) | .35 | .... | .... | .50 |
| Hogback | .80 | .... | .... | .... |
| Florence | .32 | .80 | .... | .57 |
| Iles— | | | | |
| 33 and above | .75 | .... | .... | .65 |
| Below 33 | .53 | .... | .... | .50 |
| Lea County | .50 | *.65 | .... | .... |
| Wellington | .20 | .76 | .... | .... |
| Dutton Creek | .60 | .82 | .... | .59 |
| Frannie, light | .61 | .... | .... | .51 |
| Frannie, heavy | .51 | .... | .... | .41 |
| Hudson | .65 | .... | .... | .... |
| Lander | .40 | .... | .... | .... |
| Borden (Mont.) | 1.55 | .... | .... | .... |
| Dry Creek | 1.00 | .... | .... | .... |
| Lost Soldier | .50 | .80 | .... | .... |
| Greybull | 1.05 | 1.20 | .... | .87 |

*April 1. †November 7.

Note—Salt Creek, Cat Creek, Hudson, Greybull and Hogback posted by Midwest Refining Co. and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia posted by Continental Oil Co. Border

posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard and Florence posted by the Continental Oil Co. Osage posted by Arro Oil & Refining Co.

**TEXAS PANHANDLE**

| Gray County— | Jan. 1 | Apr. 1[1] | Dec. 16[2] | Dec. 18[3] |
|---|---|---|---|---|
| Below 29 | .... | .... | .36 | .... |
| 29 to 29.9 | .... | .... | .38 | .... |
| 30 to 30.9 | .... | .... | .40 | .... |
| 31 to 31.9 | .... | .... | .42 | .... |
| 32 to 32.9 | .... | .... | .44 | .... |
| 33 to 33.9 | .... | .... | .46 | .... |
| 34 to 34.9 | .... | .... | .48 | .... |
| Below 34 | .61 | .75 | .... | .56 |
| 35 to 35.9 | .63 | .75 | .50 | .58 |
| 36 to 36.9 | .65 | .80 | .52 | .60 |
| 37 to 37.9 | .67 | .82 | .54 | .62 |
| 38 to 38.9 | .69 | .84 | .56 | .64 |
| 39 to 39.9 | .71 | .86 | .58 | .66 |
| 40 and above | .73 | .88 | .60 | .68 |

Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co.
[1]Posted by Magnolia April 1, met by Humble April 11.
[2]Posted by Philtex Oil Co. only.
[3]Posted by Humble, Gulf and Continental.

| Carson, Hutchinson, Moore Counties— | Jan. 1 | Apr. 1[1] | Dec. 16[2] | Dec. 18[3] |
|---|---|---|---|---|
| Below 29 | .... | .... | .26 | .... |
| 29 to 29.9 | .... | .... | .28 | .... |
| 30 to 30.9 | .... | .... | .30 | .... |
| 31 to 31.9 | .... | .... | .32 | .... |
| 32 to 32.9 | .... | .... | .34 | .... |
| 33 to 33.9 | .... | .... | .36 | .... |
| 34 to 34.9 | .... | .... | .38 | .... |
| Below 34 | .56 | .66 | .... | .51 |
| 35 to 35.9 | .58 | .68 | .40 | .52 |
| 36 to 36.9 | .60 | .70 | .42 | .55 |
| 37 to 37.9 | .62 | .73 | .44 | .57 |
| 38 to 38.9 | .64 | .74 | .46 | .59 |
| 39 to 39.9 | .66 | .76 | .48 | .61 |
| 40 and above | .68 | .78 | .50 | .63 |

Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co.
[1]Posted by Magnolia April 1, met by Humble April 11.
[2]Posted by Philtex Oil Co. only.
[3]Posted by Humble, Gulf and Continental.

# Completed Oil Wells in Kentucky Last Year Exceeded 1931 Record by 100

By GEORGE A. WHITNEY

Notwithstanding adverse conditions generally, there were more wells completed in Kentucky last year than in 1931, the increase having been 75. In addition to this, the number of new oil wells exceeded the record of the year before by an even 100. Daviess and Ohio Counties both surpassed Hart County in field work, the last named county having been the busiest field in 1931. However, Hart County producers were much higher in initial production per well than the wells in Ohio or Daviess.

The proportion of dry holes drilled in the State was lower than in the previous year, but there was a 50 per cent falling off in the number of gas wells reported completed last year.

Following is a summary of the work done in 1932 in the State:

**KENTUCKY FIELD**
**Summary of Wells Completed in 1932**

| Month— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| January | 30 | 1,122 | 9 | 3 | 18 |
| February | 19 | 540 | 5 | 4 | 10 |
| March | 41 | 885 | 7 | 12 | 22 |
| April | 48 | 1,460 | 15 | 9 | 24 |
| May | 37 | 1,435 | 13 | 5 | 19 |
| June | 42 | 1,968 | 13 | 2 | 27 |
| July | 59 | 4,642 | 14 | 4 | 37 |
| August | 48 | 1,765 | 20 | 5 | 23 |
| September | 62 | 1,075 | 19 | 8 | 35 |
| October | 42 | 1,006 | 18 | 2 | 22 |
| November | 31 | 650 | 12 | 0 | 19 |
| December | 36 | 975 | 9 | 14 | 23 |
| Total 1932 | 495 | 16,026 | 158 | 58 | 279 |
| Total 1931 | 420 | 12,122 | 135 | 116 | 179 |
| Difference | 75 | 3,904 | 23 | -58 | 100 |

**Completions by Counties**

| County— | Comp. | Prod. | Dry | Gas | Oil |
|---|---|---|---|---|---|
| Ohio | 120 | 3,912 | 42 | 3 | 75 |
| Daviess | 132 | 3,549 | 55 | 1 | 76 |
| Hancock | 48 | 496 | 21 | 2 | 25 |
| McLean | 36 | 1,139 | 17 | 2 | 17 |
| Hart | 88 | 4,463 | 10 | 14 | 64 |
| Christian | 7 | 0 | 0 | 7 | 0 |
| Muhlenberg | 11 | 30 | 7 | 2 | 2 |
| Henderson | 14 | 287 | 2 | 2 | 10 |
| Webster | 8 | 0 | 0 | 8 | 0 |
| Cumberland | 5 | 50 | 0 | 4 | 1 |
| Barren | 3 | 130 | 1 | 0 | 2 |
| Edmonson | 3 | 55 | 0 | 0 | 3 |
| Hopkins | 4 | 0 | 2 | 2 | 0 |
| Knox | 5 | 0 | 0 | 5 | 0 |
| Grayson | 3 | 0 | 1 | 2 | 0 |
| Warren | 2 | 1,825 | 0 | 0 | 2 |
| Nelson | 1 | 0 | 0 | 1 | 0 |
| Pike | 2 | 0 | 0 | 2 | 0 |
| Boyle | 1 | 0 | 0 | 1 | 0 |
| Clinton | 1 | 15 | 0 | 0 | 1 |
| Lee | 1 | 75 | 0 | 0 | 1 |
| Total | 495 | 16,026 | 158 | 58 | 279 |

## CHILEAN OIL LAW ATTACKED

The Standard Oil Co. has filed a suit in the Supreme Court of Argentine against the Province of Salta, charging that the recently enacted tax on petroleum production is unconstitutional.

## Russian Oil Production Declined, Says Warsaw

WASHINGTON, D. C., Jan. 23.—Increased petroleum exports from Russia is seen by observers in the international oil trade, according to Sheldon Crosby, American charge d'affaires at Warsaw, Poland. In a report to the Commerce Department, Mr. Crosby noted the importance of oil exports from the Soviet Union because of the continued decline in exports of farm products.

The Crosby report, based on official Soviet sources, said oil exports were increased 15 per cent in the first seven months of 1932, but that the value declined on account of low world market prices. Internal consumption was limited, the report added. Exports of Soviet gasoline declined during the first seven months of 1932, compared with the same period in 1931.

During the second half of last year, Mr. Crosby reported, the Soviets concluded agreements making possible sale of oil products in Canada and France, but he noted the export limit is the productive capacity of the industry. Claims that Soviet oil production reached its peak in 1931 were quoted in the Crosby report with output reported declining each month from May to September, 1931. Output for the year 1931 did not exceed 21,900,000 tons, according to Mr. Crosby. More important than the drop in production is the reported decline in quality of oil, said to show quantities of water and other impurities.

**STANDARD OIL CO OF CALIFORNIA**

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

| Gravity— | Signal Hill (Long Beach) | Seal Beach, Alamitos Heights | Inglewood | Playa Del Rey (see note) | Olinda-Brea Canyon | Torrance | Richfield | Coyote Hills | Santa Fe Springs | Midway-Sunset, Elk Hills, Buena Vista Hills | Lost Hills | Athens, Rosecrans, Dominguez | Montebello | Wheeler Ridge | Coalinga | Whittier-LaHabra | Huntington Beach | Orcutt* | Santa Paula* | Elwood Terrace (f.o.b. ship) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-14.9—Jan. 1 | $.65 | $.65 | $.65 | .... | $.65 | $.65 | $.65 | $.65 | .... | $.55 | $.55 | .... | $.65 | $.55 | $.55 | $.65 | $.65 | $.55 | $.65 | .... |
| June 26 | .65 | .65 | .66 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .... | .65 | .... |
| 15-15.9—Jan. 1 | .65 | .65 | .65 | .... | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| June 26 | .65 | .65 | .66 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .... | .65 | .... |
| 16-16.9—Jan. 1 | .65 | .65 | .65 | .... | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| June 26 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| 17-17.9—Jan. 1 | .65 | .65 | .65 | .... | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| June 26 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| 18-18.9—Jan. 1 | .65 | .65 | .66 | .... | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| June 26 | .65 | .65 | .66 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| 19-19.9—Jan. 1 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| June 26 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .65 | .55 | .65 | .... |
| 20-20.9—Jan. 1 | .65 | .65 | .66 | .65 | .66 | .65 | .65 | .65 | .... | .55 | .55 | .... | .65 | .55 | .55 | .65 | .66 | .56 | .65 | .... |
| June 26 | .69 | .69 | .71 | .69 | .69 | .69 | .65 | .65 | .... | .59 | .59 | .... | .65 | .57 | .59 | .68 | .69 | .59 | .69 | .... |
| 21-21.9—Jan. 1 | .65 | .65 | .68 | .66 | .67 | .65 | .66 | .65 | .... | .56 | .57 | .... | .65 | .55 | .56 | .65 | .68 | .57 | .65 | .... |
| June 26 | .74 | .74 | .77 | .74 | .74 | .74 | .74 | .66 | .... | .63 | .63 | .... | .67 | .60 | .62 | .72 | .74 | .62 | .72 | .... |
| 22-22.9—Jan. 1 | .65 | .65 | .70 | .67 | .68 | .66 | .68 | .65 | .... | .56 | .59 | .... | .65 | .55 | .55 | .65 | .70 | .59 | .65 | .... |
| June 26 | .79 | .79 | .82 | .78 | .79 | .79 | .79 | .70 | .... | .69 | .69 | .... | .70 | .63 | .65 | .77 | .79 | .69 | .75 | .... |
| 23-23.9—Jan. 1 | .67 | .67 | .72 | .68 | .70 | .67 | .70 | .66 | .... | .58 | .60 | .... | .66 | .55 | .55 | .65 | .72 | .61 | .65 | .... |
| June 26 | .84 | .84 | .88 | .82 | .84 | .84 | .84 | .76 | .... | .75 | .75 | .... | .73 | .66 | .68 | .83 | .84 | .75 | .78 | .... |
| 24-24.9—Jan. 1 | .69 | .69 | .74 | .69 | .72 | .68 | .72 | .67 | $.65 | .61 | .62 | $.69 | .65 | .55 | .55 | .65 | .74 | .62 | .66 | .... |
| June 26 | .89 | .89 | .92 | .86 | .89 | .89 | .89 | .81 | .73 | .81 | .81 | .89 | .76 | .69 | .72 | .89 | .89 | .81 | .81 | .... |
| 25-25.9—Jan. 1 | .71 | .71 | .76 | .70 | .74 | .70 | .74 | .69 | .65 | .64 | .64 | .71 | .65 | .55 | .58 | .... | .76 | .65 | .68 | .... |
| June 26 | .93 | .93 | .... | .91 | .93 | .93 | .93 | .86 | .79 | .87 | .87 | .93 | .80 | .72 | .76 | .... | .93 | .87 | .84 | .... |
| 26-26.9—Jan. 1 | .73 | .73 | .... | .... | .76 | .... | .... | .71 | .65 | .66 | .66 | .73 | .... | .... | .... | .... | .... | .67 | .70 | .... |
| June 26 | .97 | .97 | .... | .96 | .97 | .... | .... | .90 | .84 | .92 | .91 | .97 | .... | .... | .... | .... | .97 | .92 | .87 | .... |
| 27-27.9—Jan. 1 | .75 | .75 | .... | .... | .78 | .... | .... | .73 | .68 | .68 | .67 | .75 | .... | .... | .... | .... | .... | .... | .72 | .... |
| June 26 | 1.00 | .... | .... | .... | 1.00 | .... | .... | .94 | .89 | .97 | .94 | 1.00 | .... | .... | .... | .... | .... | .... | .90 | .... |
| 28-28.9—Jan. 1 | .77 | .... | .... | .... | .80 | .... | .... | .75 | .71 | .71 | .69 | .77 | .... | .... | .... | .... | .... | .... | .74 | .... |
| June 26 | 1.03 | .... | .... | .... | 1.03 | .... | .... | .98 | .94 | 1.02 | .99 | 1.03 | .... | .... | .... | .... | .... | .... | .93 | .... |
| 29-29.9—Jan. 1 | .79 | .... | .... | .... | .... | .... | .... | .77 | .73 | .74 | .71 | .79 | .... | .... | .... | .... | .... | .... | .76 | .... |
| June 26 | 1.06 | .... | .... | .... | .... | .... | .... | 1.02 | .98 | 1.07 | 1.02 | 1.06 | .... | .... | .... | .... | .... | .... | .99 | .... |
| 30-30.9—Jan. 1 | .81 | .... | .... | .... | .... | .... | .... | .79 | .75 | .76 | .72 | .81 | .... | .... | .... | .... | .... | .... | .78 | .... |
| June 26 | 1.09 | .... | .... | .... | .... | .... | .... | 1.06 | 1.02 | 1.12 | 1.05 | 1.09 | .... | .... | .... | .... | .... | .... | .... | .... |
| 31-31.9—Jan. 1 | .... | .... | .... | .... | .... | .... | .... | .... | .78 | .... | .... | .83 | .... | .... | .... | .... | .... | .... | .... | .... |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .96 | .... | .... | 1.12 | .... | .... | .... | .... | .... | .... | .... | .... |
| 32-32.9—Jan 1 | .... | .... | .... | .... | .... | .... | .... | .... | .80 | .... | .... | .85 | .... | .... | .... | .... | .... | .... | .... | .... |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .10 | .... | .... | 1.15 | .... | .... | .... | .... | .... | .... | .... | .... |
| 33-33.9—Jan. 1 | .... | .... | .... | .... | .... | .... | .... | .... | .83 | .... | .... | .87 | .... | .... | .... | .... | .... | .... | .... | $.79 |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .14 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.04 |
| 34-34.9—Jan. 1 | .... | .... | .... | .... | .... | .... | .... | .... | .85 | .... | .... | .89 | .... | .... | .... | .... | .... | .... | .... | .81 |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .18 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.10 |
| 35-35.9—Jan. 1 | .... | .... | .... | .... | .... | .... | .... | .... | .87 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .84 |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .22 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.16 |
| 36-36.9—Jan. 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .87 |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.22 |
| 37-37.9—Jan. 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| June 26 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.28 |

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon and Olinda, up to 35.9 degrees; Richfield, Ventura Avenue, Midway-Sunset, Fruitvale, Kern River, Poso, Round Mountain and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents, and Standard's prices for oil of higher gravity.

**Kettleman Hills**—General Petroleum Co., effective January 1, posted following prices: 33-33.9 degrees, 66 cents; 34-34.9 degrees, 68 cents; 35-35.9 degrees, 70 cents; 36-36.9 degrees, 72 cents; 37-37.9 degrees, 74 cents; 38-38.9 degrees 76 cents; 39-39.9 degrees, 78 cents. The Associated Oil Co. was paying 66 cents for oil 30 gravity and over. The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over $1.03. Standard Oil Co., as its initial posting, Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

**Shiells Canyon and South Mountain**—The Texas Company, effective June 26, posted same prices as in Santa Paula.

**Playa Del Rey**—Subject to a field gathering charge of 5 cents per barrel.

**Newhall, McKittrick and Kern River**—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.
*Posted by Union Oil Co. only.

# Panhandle Operations in 1932 Affected by Big Production in Other Districts

Conditions and activities in the Texas Panhandle in 1932 were not of the best, mainly due to East Texas assuming such an overwhelming importance in the industry of Texas, coupled with that of the later discovered field of Conroe, curtailment cutting production in the Panhandle still lower, and prices remaining at a low figure.

Independent operators and gas owners assumed an aggressive stand against the large gas producers and purchasers in the district, resulting in many hearings held by the railroad commission, all of which failed to bring any relief. An injunction obtained by three of the major purchasers, however, placed the commission in an embarrassing position when power to regulate production and purchases was stripped from that body by the injunction, which still stands. The fight no doubt will continue through 1933 in regard to this situation, landowners and independents not being willing to give up under such conditions.

There were 159 completions reported for the Panhandle district in 1932, a decrease of 90 from the previous year. Only 27 gas wells were completed, whereas in 1931 there were 77. A large supply of gas already on hand from wells which were previously drilled, and a decrease in demand of gas during 1932, were responsible for this smaller number of gas wells drilled. Twenty-two dry holes were drilled in the district during the past 12 months while in 1931, 29 were drilled. The majority of these were in wildcat territory, and as wildcatting has been almost completely stifled in the district, fewer abandonments were registered. There no doubt will be little wildcatting done in the district during 1933 because of existing conditions not warranting such work.

### Deep Test in Cottle County

One interesting wildcat is now being drilled in Cottle County by the Darby Petroleum Co. and others. The test is located in Section 40, 1 mile south and 10 miles west of Paducah. The test is seeking the deep pay found in the Big Lake Field in Reagan County, and is expected to go to 6,000 to 6,500 feet unless oil in commercial quantities is found at a lesser depth.

The Magnolia Petroleum Co. abandoned a deep test in Section 73, H. Kelly Survey, in Parmer County, during the latter part of the year. It was abandoned at 5,830 feet. A 30,000-acre block was held around this test.

The Humble Oil & Refining Co. abandoned a wildcat test in Section 7, in the H. Kelly Survey, Briscoe County, at a total depth of 4,010 feet.

The Watchorn Oil & Gas Co. has taken over a 30,000-acre block in Haskell County, location being in Section 31, Wise County school lands, 4 miles west and 1 mile north of Rule and 17 miles northeast of Cranfill & Reynolds' No. 1 George, in Fisher County, which is now plugging to abandon after drilling past 6,400 feet. The test in Haskell County is to be a deep test also, and will be closely watched for results.

No new fields were opened in the district during the year, and only extensions of minor importance were registered in Wheeler, Moore and Gray Counties.

### Many Wells Deepened

Many wells have been deepened during the year in an effort to increase production, some of them proving successful while others were plugged and abandoned. A few wells in the district are now undergoing acid treatment in an effort to increase production. Two wells reported such treatment successful, and if it proves successful in the pay formations in the district 1933 will no doubt see many wells given such treatment to increase their production.

### Commission Enjoined

The Danciger Oil & Refining Co. obtained an injunction against the railroad commission during the year to restrain that body from interfering with the producing of Danciger's wells in the Panhandle district. Much controversy was had over this injunction, offset operators complaining because they could not produce their wells the same as the Danciger wells. Part of the time they were granted such permission, the commission later revoking its previous condescension.

The only purchase of major importance in the district during 1932 was the taking over of 15,000 acres, 60 producers and 1,100 bbls. per day production by the King Royalty Co. from the Dixon Creek Oil & Refining Co.

The Red Ball Refining Co., which is associated with the Petroleum Refractionating Co. plant at Borger, installed a 2,500-bbl. cracking unit during the latter part of the year. But little other refinery work was reported for the district.

The tables on production and field operations in the Panhandle in 1932 will be found on pages 108 and 111.

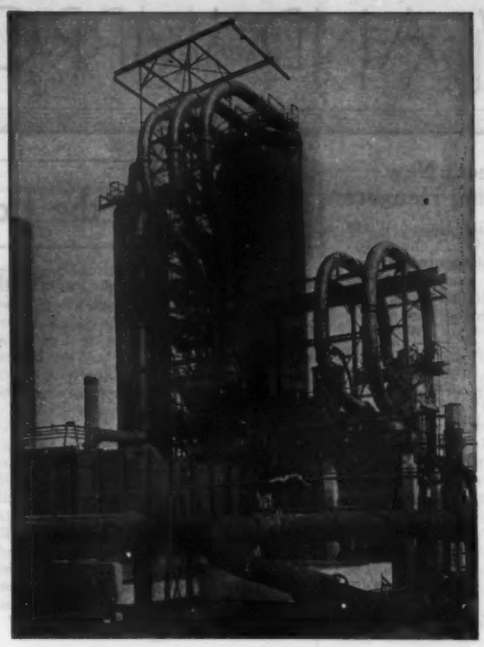
## Oil Leasing Law Hearing for Washington Feb. 1

WASHINGTON, D. C., Jan. 23.—The Secretary of the Interior has announced that he will hold in his office in Washington on February 1 next an oral hearing on the interpretation of the terms "production and oil produced" as used in the mineral leasing law of February 25, 1920.

"On August 6 last," Mr. Wilbur says, "the Acting Secretary of the Interior interpreted that phrase to mean that royalty shall be paid on the basis of actual production from the area leased, the volume of production to be determined by tank measurement based on 100 per cent capacity tables and computed in terms of standard barrels of clean oil. Numerous appeals, protests and endorsements of the interpretation were received from lessees and others. I, therefore, call this meeting that lessees and operators on government lands, states receiving the benefit of royalties, and all other interested parties, may have opportunity to appear or be represented."

SUMMARY OF STATEMENTS MADE JANUARY 10, 1933, RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING DECEMBER 31, 1932

| | Gross stocks | Runs from wells | Other receipts | Regular deliveries | Other deliveries |
|---|---|---|---|---|---|
| Nat. Transit | 576,760.70 | 184,248.57 | 999,729.51 | 564,142.80 | 696,976.29 |
| S. W. Pa. P. L. | 395,813.19 | 53,133.56 | 710,259.11 | 433,433.83 | 311,739.00 |
| Eureka P. L. | 1,010,482.31 | 334,047.52 | 325,760.35 | 176,061.90 | 167,854.31 |
| Buckeye P. L. (Macksburg) | 381,126.13 | 236,254.81 | 124,195.43 | 233,296.40 | 123,873.07 |
| Buckeye P. L. (Lima, etc.) | 2,553,050.19 | 66,182.28 | 1,988,670.47 | 1,383,479.91 | 691,588.72 |
| Buckeye P. L. (Cleveland) | 62,884.73 | 9,844.88 | 244,438.11 | 1,708.70 | 322,296.13 |
| Indiana P. L. | 507,273.67 | 1,481.00 | 1,392,394.00 | 1,044,961.84 | 337,167.30 |
| Southern P. L. | 187,747.67 | ..... | 40,351.97 | 45,636.81 | 34,958.69 |
| Bradford Trans. | 298,545.38 | 386,023.77 | ..... | 395,061.80 | ..... |
| N. Y. Transit | 92,931.48 | 31,542.65 | 142,712.44 | 181,237.45 | ..... |
| Northern P. L. | 211,546.14 | ..... | 554,618.95 | 187,906.61 | 375,868.57 |
| Tide Water P. L. | 545,246.63 | 20,844.56 | ..... | 406,183.32 | ..... |
| Tuscarora Dev. | 9,426.35 | ..... | ..... | 272,595.24 | ..... |
| Total December 31 | 6,642,826.56 | 1,331,603.60 | 6,433,130.44 | 5,225,707.61 | 2,962,316.08 |
| Total November 30 | 6,547,748.27 | 1,201,804.04 | 6,119,667.80 | 5,180,482.69 | 2,899,212.78 |
| Difference | 96,078.29 | 19,804.56 | 303,462.64 | 45,224.92 | 63,103.30 |

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GULF REFINING COMPANY

General Sales Offices: Pittsburgh, Pa.

# NEW AND IMPROVED EQUIPMENT

## Bridgeport Perfects New Line of Pumping Hangers

The Bridgeport Machine Co. of Wichita, Kans., is announcing a new and complete line of beam pumping hangers, which comprise eight models. These hangers, designed for pumping wells up to 5,000 feet, embody improved and unique features.

A two-piece, wedge-type polished rod clamp, which holds and adjusts itself to the rod, is used on all models. No tools are required to adjust or install the clamp as it contains neither screws nor bolts. It is detached from the hanger reins by a quarter turn upward. The construction of the clamp eliminates the danger of throwing the hanger off the

beam or of damaging the hanger in case the rods fail to drop. The clamp rides freely up and down on the reins in case of necessity.

Three types of alloy-steel, heat-treated heads are used. A knuckle-joint type head absorbs much of the lateral motion and permits the hanger to line up with the well even when the beam is off center or warped. The solid type head is used on installations where it is unnecessary to compensate for side motion or crooked beams. The wheel type head is designed to equalize the weight of the well on the hanger reins when wire line is used instead of steel rod reins.

Wire line reins and steel rod reins are interchangeable on all models of hangers, and hangers are designed for both regular and underslung beams. When used on a regular beam a saddle, in which the head rides, lowers the fulcrum point of the load, permitting a more nearly straight lift of the rods.

## Among the Equipment Houses

The Mission Manufacturing Co., Houston, Tex., has appointed Patrick H. Heeney, Apartado 298, Maracaibo, Venezuela, representative in the sale of Mission products in Venezuela, Colombia, Trinidad and Aruba, Dutch West Indies. Mr. Heeney has been in South America seven years and before that covered the oil fields of Mexico.

—

The Babcock & Wilcox Tube Co. has appointed Frits Hoving its West Coast district sales manager. Mr. Hoving will make his headquarters with A. M. Castle & Co., at 2200-2300 East Fifty-fifth Street, Los Angeles, Calif., and will maintain active touch with the offices of that company in San Francisco and Seattle. A. M. Castle & Co. handle seamless steel and alloy tubes and pipe manufactured by Babcock & Wilcox.

—

The turbine sales department of the General Electric Co. has been made a division of the central station department, following the retirement of Elmer E. Gilbert, manager of the turbine sales department. R. B. Beale, former assistant manager, succeeds Mr. Gilbert with the title of manager of the turbine division.

—

Henry S. Demarest, who owns a controlling stock interest in Greene, Tweed & Co., 109 Duane Street, New York, manufacturers of packing, has been made president and treasurer of the corporation. James A. McKeon has been elected vice president and Herbert A. Erwood secretary. Willard R. Platt, formerly president, secretary and director, and Harold B. Platt, formerly vice president, treasurer and director, resigned these offices.

—

Nelson E. Chance, formerly district manager of the Houston, Tex., office of the Brown Instrument Co., has been appointed assistant sales manager, with headquarters in Philadelphia. Mr. Chance has been with the company over 10 years and for seven years was manager of the district comprising Texas, Louisiana and southern Arkansas.

## Oil Blast Is Utilized in New G. E. Circuit Breaker

A new line of circuit breakers, rated 15, 25 and 34.5 kilovolts, is announced by the General Electric Co. These breakers are equipped with oil-filled bushings of a new type, which give the same efficient insulation and good service, for potentials up to 34.5 kilovolts, that higher voltage oil-filled bushings have given in the past.

By utilizing the oil-blast principle of circuit interruption, the breakers operate in eight cycles. They are designated Type FHKO-339, designed for indoor and outdoor service, and have interrupting ratings from 500,000 to 1,500,000 kv-a.

Breakers are of the round-tank construction (one per pole). The three top domes are welded into a single supporting plate. Mechanism is entirely internal, eliminating any tendency to reclose during or after circuit interruption.

The oil-blast principle of circuit interruption, used in these breakers, involves forcing oil through a definite channel into the arc path, preventing the arc from restriking after a current zero.

## Houston Downtown Office Is Opened by Frick-Reid

The Frick-Reid Supply Corp., Tulsa, has established a downtown sales office in Houston, Tex., at 711 Esperson Building, in addition to its supply store at 3230 Quitman Street, thus increasing its facilities for handling a growing business in that district.

C. E. Dowd is in charge of the Houston office and store and C. B. Moore continues as local store manager. J. C. Boggs, Jr., who has been district manager for the company in the Texas Panhandle, is transferred to Houston as a general salesman. F. W. Brigance is transferred from Tulsa to Houston as a representative of the company's credit department. G. S. Emerson continues sales work in the Houston territory.

The Beaumont Iron Works Co., in which Frick-Reid is financially interested, will be represented in Houston by Harry Zwerneman, whose headquarters will be in Frick-Reid's downtown sales office.

## Friction Diminished in the New TAG Diaphragm Valve

After more than a year's service on hundreds of installations, the TAG friction-free diaphragm valve is now announced by the C. J. Tagliabue Manufacturing Co., Brooklyn, N. Y. This im-

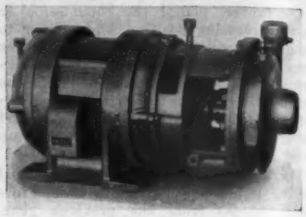
proved superstructure is mounted on TAG V port balanced valves, giving gradual opening characteristics.

Friction is cut to a minimum by reducing the diameter of the spindle passing through the stuffing-box. The spindle is perfectly guided by its upper (large diameter) portion, which passes through two roller-bearing assemblies, each consisting of four stainless steel rollers. Roller bearings are preferred to ball bearings for guiding the reciprocating spindle movement in a frictionless manner.

The spring (single or multiple) is enclosed, as is also the diaphragm. A positive indicator is furnished. Adjustments are easily made, available with 7½, 9½ and 11½-inch diameter diaphragm.

## Allis-Chalmers Announces Additional Pumping Units

The Allis-Chalmers Manufacturing Co., Milwaukee, Wis., has again extended its line of SSU motor-driven single-shaft, two-bearing pumping units. It has developed three sizes to work against heads up to 100 pounds (231′ head) and above



and covering a range in capacity from 30 gallons per minute to 140 gallons per minute. These pumps fill the need for high-head pumps of low capacities.

The pumps and motors are both built and guaranteed by the same manufacturer, eliminating divided responsibility. The purchasers are assured that pumps and motors are properly proportioned so as to work together as an efficient reliable unit. A single shaft is used on which to mount the motor rotor and the pump impeller. This shaft is supported by two ample-sized ball bearings. This construction is designed to eliminate possibility of misalignment between the pump and the motor.

## Kodalith Process Removes Necessity of New Drawing

The Kodalith process, announced by the Tulsa Camern Record Co., is said to mark a distinct advance in the reproduction of oil field maps and other objects, in that it removes limitations as to size imposed by the usual photostat and blueprint work. By this process either enlarged or reduced reproductions can be made without redrawing. Increasing demand in the oil industry for reproductions of maps, tank tables, graphs, abstracts of title, leases, deeds, checks, mortgages, mechanical drawings, etc., has led the company to devote special attention to this branch of its service. The company, which recently moved into larger quarters in the Kennedy Building, 317 South Boston Avenue, Tulsa, makes both photostat copies and blueprints, and much of its business is done by mail.

Many oil companies eliminate the nuisance of storing accumulations of big maps by having small photostat copies made. In other cases enlargements are desired, and these can be made up to 40 by 70 inches. There is a growing practice, too, of safeguarding instruments of special value by having reproductions made and then filing the originals in a vault for safekeeping. Photostat copies may be made on one or both sides of the paper. Attorneys for oil companies can obtain exact reproductions of legal records.

George J. Ratcliffe is president and treasurer of the Tulsa Camera Record Co., Frank B. Deshon vice president, LaGrange Ratcliffe secretary and H. N. Masoner manager. The Kodalith process was developed in Oklahoma by Mr. Masoner.

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A broadside mailed by the Gunite Foundries Corp., Rockford, Ill., tells about the Guncor Pot-o-gold, described as a nonecrushable and nondrillable device for safeguarding money and other valuables and of special value in protecting service stations from robbery.

# FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

## Questions About Rock Pressure and Bottom Hole Pressure

**Explain the difference between rock pressure as measured at the well mouth and bottom hole pressure as measured at the bottom of the well. What principle is involved in measuring bottom hole pressure? Where may the special instruments for this purpose be obtained? I am impressed by the need for better engineering by the small operators in the puddle fields.—T. M. G.**

In the first place the term "rock pressure" has been used rather loosely and unless it is defined in some concrete manner it might mean any one of several things. It seems well to consider rock pressure as the weight imposed upon underground strata the overlying accumulation of sediments. The specific gravity of average sediments is about 2½ times that of water. The weight of a column of water 1 foot high is .43 pound per square inch. The rock pressure, therefore, might be calculated roughly by multiplying the depth of the stratum by .43 pound by 2½.

Another way rock pressure has been estimated is to take the shut-in pressure of a well and report that as the "rock pressure."

Since bottom hole or subsurface pressure instruments have been used to obtain actual pressures at any point below the surface, many interesting things have been learned showing that the old conception of rock pressure was not accurate.

The pressure exerted opposite a stratum may not compare in any way with the weight of a column of water of equal height. From a paper by C. V. Millikan the following table is quoted:

| Formation— | Depth (feet) | Pressure (lbs.) | Equivalent head of fresh water (feet) |
|---|---|---|---|
| Miscner sand ..... | 3,967 | 988 | 2,276 |
| Hunton limestone ... | 3,980 | 1,520 | 3,502 |
| Simpson dolomite ... | 4,068 | 1,152 | 2,654 |
| First "Wilcox" sand | 4,124 | 637 | 1,467 |
| Second "Wilcox" sand | 4,217 | 800 | 1,843 |

By studying the above table of conditions found in the Seminole Pool you will note many things that do not agree with old ideas; also some conditions that may be hard to explain. For instance, why is the pressure in the lower sands less than the pressure in the upper sands? The pressures certainly cannot be attributed to equivalent hydrostatic heads of water.

You ask what principle is involved in measuring bottom hole pressure? It is not certain what you mean by this question. Do you want to know about the instruments or the theory of cause of bottom hole pressures?

If you desire to learn about the instruments it is suggested that you read an article by C. V. Millikan and Carroll V. Sidwell published in the May 14, 1931, issue of The Oil and Gas Journal, page 95. Also an article by John H. Payne in the June 25, 1931, issue. These articles tell how two types of instruments are made. There are several other types of instruments but they are all some type of pressure gauges confined in a small diameter tube that is liquid and gastight, except for one opening that leads to the recording mechanism.

There is only one commercial instrument on the market today so far as this department knows.

Past work has been most enlightening as to field conditions and without doubt there will be a further application of subsurface pressure readings to future operations and it is believed that through the use of this type of data much will be gained in operating practice and greater recovery of oil.

To give a definition of bottom hole pressure the following is quoted from the paper by Mr. Millikan and Mr. Sidwell, already referred to:

"Bottom hole pressure, or depth pressure, is the pressure at or near the bottom of a well. It is usually determined at the face of a porous reservoir of sandstone or limestone, penetrated by the well. If the well has been shut in or shut down long enough for the pressure at the face of the sand to equalize with the pressure in the reservoir within the drainage area of the well, it may be called the reservoir pressure. If the bottom hole pressure is determined while the well is producing, it may be called the bottom hole flowing pressure or bottom hole producing pressure."

It is now common practice to correct all pressure readings to a common datum line and from these readings to establish contour lines of equal pressures which will divide a field into zones of equal pressure. By scaling the area of the individual zones and computing the relation of each zone to the whole field it is possible to obtain a weighted average pressure. This plan is now operative in the East Texas Field.

While the data accumulated by the use of subsurface pressure instruments is not of great volume as yet, still some of the results obtained by a study of it are most beneficial.

It is predicted that in time royalty will be transferred upon the basis of valuations established by the use of subsurface pressure data. Knowing a well's position on the structure, the subsurface pressure, the character of the sand, its thickness as penetrated by the well, the drainage area of each well and relative position of the water table it is going to be possible to make some close estimates of the future decline curves for the lease.

They will be so much in advance of anything so far attempted that it is believed their use will become general and then a piece of land or the royalty on it will be evaluated in definite terms based upon accumulated data from the underground conditions.

It is admitted that more than one interpretation may be placed upon any set of data, but it is expected that in time certain standards of values will be established and generally accepted and then it will be possible to arrive at representative results. At this time subsurface instruments are giving valuable data for any field where used.

## Sketches Showing Anchorage for High-Pressure Well Fittings

**We are desirous of obtaining blue prints or sketches showing proper anchorage for high-pressure gas wells. This, of course, should cover the proper size valves used for various pressures as well as anchor bolts, etc., used in common practice throughout the high-pressure gas fields.—H. G. B.**

It is suggested that you obtain from the Superintendent of Documents, Government Printing Office, Washington, D. C., a copy of the recently issued Technical Paper No. 535, "Crater Wells, Richland Gas Field, Louisiana," by H. B. Hill. It costs 10 cents a copy and is complete in the information you desire.

## Why Was It Called That?

### DITCH POWDER

Ditch powder is so called because it is used for loosening masses of earth in ditching operations, as for the construction of a pipe line. Sometimes it is called railroad powder for the reason that it is employed in railroad excavation. It is a low-grade dynamite, containing about 10 per cent of nitroglycerin, absorbed in a finely ground mixture of coal, sulphur, sodium nitrate, rosin or similar substance. A powder of this character has a relatively slow rate of burning, which adapts it for upheaving soft materials where a high-grade dynamite would merely blow out a small crater.

## Wants Articles on the Geology of Wyoming, Montana, Colorado

**As a subscriber to your valuable magazine for a great many years, may I ask you to give me the dates of The Oil and Gas Journal containing any articles on the geology of Wyoming, Montana and Colorado? I am especially interested in articles dealing with the geology of these States in a broad way.—C. M. J.**

Articles of the kind you describe which have appeared in The Oil and Gas Journal include the following: "Little Buffalo Basin Reserve Is Cause of Much Speculation," by Tolbert R. Ingram, May 7, 1931; "Northeastern Colorado Potential Area," June 25, 1931; "Geologic Work in Eastern Colorado," by C. H. Rankin, April 24, 1930; "Possibilities in the Julesburg Basin in Eastern Wyoming and Northeastern Colorado," by John G. Bartram, January 23, 1930.

If you will write to the state geologist of Wyoming, Cheyenne, Wyo., you can get from him copies of his reports on oil and gas fields in that State. It is probable that you also can get information of the same character from the state geologists of Colorado and Montana by addressing them at Denver and Helena, respectively.

The American Association of Petroleum Geologists, Tulsa Building, Tulsa, may be able to supply you with reprints of papers presented before that society on this region.

## Finished a Nasty Fishing Job and Doesn't Want Another Like It

**I have just got through with a nasty fishing job and I would like to avoid the same sort of job in the future. We were drilling with cable tools at a depth of about 4,000 feet when we went into a formation with a strong gas pressure that blew the tools up the hole. On their way up the tools got tangled with the drilling line and stuck. It seems as though there should be some way of preventing this kind of occurrence. I have heard of running water into the hole before drilling in. Can you tell me whether this is done and whether it is effective or not?—H. H. T.**

If you desire to complete a well with cable tools and drill into formations carrying high gas pressures it is suggested that you follow the method outlined in Technical Paper 68, published by the U. S. Bureau of Mines and prepared by A. G. Heggem and J. A. Pollard. It is entitled "Drilling Wells in Oklahoma by the Mud-Laden-Fluid Method" and describes the successful use of mud-laden fluids in cable tool holes during the Cushing Pool drilling activities.

By carrying this weighted fluid above the formation gas is held under control and the hole can be completed without the gas blowing the tools up the hole. After the casing has been set the mud is bailed out of the hole and the gas formation then is cut off by the casing and the cement back of it.

In many instances clear water will provide sufficient weight in the hole to give the same results, but it is safer to use mud-laden fluid because this material can be made to give pressure at the face of a formation and in this way the same effect as that obtained in rotary drilling can be applied to cable-tool work.

# TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the questions is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

## Important Elements of Gasoline and Object of Refining

**What are the important elements of gasoline and what is done in the refining that eliminates the poor to strengthen the better and more forceful elements?—J. L. M.**

The fundamental operation required for the manufacture of gasoline is that of distillation, for the separation of the group of volatile hydrocarbons that make up the product called gasoline. Distillation requires that a substance be heated to the boiling point and then the condensation of the resulting vapors. All pure substances boil at a constant temperature; pure water, for example, if placed in a still, heated to the boiling point and the temperature maintained, will gradually evaporate so that finally all of it will be converted into a vapor with no residue. If the vapors are passed through a pipe surrounded by a cooling medium, they will condense to be recovered as water, exactly like the original substance.

Unlike water, petroleum is composed of many different substances some of which boil at a very low temperature and are not oily, others boil only at elevated temperatures and are oily. The boiling temperature of petroleum varies, those crude oils containing the largest quantities of gasoline boil and are changed into vapors at the lowest temperatures. The hydrocarbons utilized for gasoline change into vapor at temperatures so close together that even a very slight change in the temperature will cause a change in the composition of the distillate. It is the object of the refiner to adjust the heat, the fractionating equipment, which is a system including partial condensation and reboiling, and the condensing conditions so that the maximum yield of the volatile products, suitable for gasoline, will be obtained and contaminated with the heavier and oily constituents.

The gasoline of the modern refinery is a blend of several fractions; the lightest are condensed from natural gas or from the vapors of the several units of the refinery, the next are the fractions from the crude oil, and, finally the synthetic gasoline from the pressure stills. This raw gasoline must be treated chemically in order to remove objectionable substances, such as color forming compounds, gums and sulphur. Certain hydrocarbons reduce the tendency of gasoline to knock when it is used as motor fuel and because a high antiknock rating, octane number, is desirable, the distillation and treating processes must be so adjusted as not to cause a loss of any large part of these hydrocarbons. Marketing conditions require that gasoline shall be clear and bright, free from color, so the gasoline must be handled during the purification operations and while in storage so that there will not be the slightest contamination with any material that will impart a color to the product.

The consumer demands that gasoline shall have easy starting qualities, which is a characteristic of the hydrocarbons boiling at low or ordinary temperatures. The heating value of all gasolines is adequate. Total volatility is controlled by the distillation test, the 90 per cent point being selected to prevent a high endpoint, which would cause excessive crankcase dilution. The gasoline must be dry and free from corrosive substances. The chemical composition should be such that when the gasoline is used as motor fuel it will not produce an objectionable knock in the motor. The bad knocking gasolines are usually adjusted by the addition of an antiknock chemical and frequently by suitable blending of refinery stocks.

## High Test Originally Applied to Gasoline of High Gravity

**Is there such a thing as "High Test Gasoline" or is it just a trade name? I have used The Oil and Gas Journal market quotations for several years when buying gasoline and have never seen a high test quotation. I find in the market quotations gravities of 66 on up to 88 it gets cheaper. Also the highest prices are on the low initials and low endpoints; only high octane number, low initial and low endpoint seem to make a high priced gasoline.—W. H.**

The term high test was originally applied to gasoline of high gravity. It appears that the gravity indication was the first method employed for the grading of gasoline. In the early days of the industry, gasoline was of little value but with the development of the automobile, a demand was created for the product. The high gravity gasoline, obtained by the simple distillation of petroleum, was found to give good performance and consequently the trade soon demanded the gasoline showing a high gravity by the hydrometer test; hence, high test.

The same term has been applied to kerosene, to indicate an oil with a high flash point. When kerosene was the valuable petroleum product, there was a tendency on the part of the refinery operator to increase the yield by permitting some of the gasoline to be included in the kerosene fraction. This frequently caused the kerosene to flash at a dangerously low temperature. Laws were made requiring kerosene to have a safe flash point; in many instances 110° to 125°F. being the minimum permitted. Kerosene passing such requirements was called high test oil. In a similar way the term has been used to indicate high viscosity lubricating oils. The latest application of high test is the reference to octane numbers for the knock rating of gasoline. As indicated by these several examples, the term has no special meaning, although any group of petroleum technologists would probably agree, if no other property was shown, that a high test gasoline is one having a high A.P.I. gravity.

The market quotations for gasoline apply to the finished product which must comply with established standards, and as the gasoline in greatest demand is one with a moderate gravity, low initial, low end point and high octane rating, it is natural that the product which most satisfactorily meets the specifications covering these properties, will command the best price. The gasoline which is even better, is entitled to a premium. A gravity of 88 indicates natural gasoline, extensively used for blending.

So far as I am informed, there is no gasoline now quoted under the market classification "high test."

## Gasoline Sales Based on U. S. Motor and Octane Numbers

**I am making a survey and analysis on gasoline and would appreciate any information or data that you may have pertaining to analyses and octane ratings.—J. L. M.**

The recognized base standard for gasoline is what is known as U. S. Motor gasoline, the most important specification for this product being volatility as determined by distillation. The distillation points are: 10 per cent evaporated at 167° F.; 50 per cent at 284°; 90 per cent at 392°. All of these are maximum temperatures for the given percentages. The residue shall not exceed 2 per cent. The maximum permissible vapor tension is 12 pounds. Total sulphur shall not exceed 0.1 per cent and the product must pass the corrosion test.

While there is no adopted standard for antiknock rating, the trade has recognized the fact that gasolines vary in this respect according to the composition of the crude oil and the refining processes. It is now the practice to quote prices for gasoline on the basis of U. S. Motor gasoline and the seller receives a premium of gasoline testing higher than 57 octane number. Gasoline showing a knock rating between 57 and 65 octane number commands a premium of three-eighths of a cent per gallon above the market for U. S. Motor. If the gasoline tests higher than 65 octane number it may be sold for five-eighths of a cent above the base price. The nonpremium grade gasoline will usually show an octane value under 70. The premium motor fuels, usually selling at retail for 3 cents more than the standard grade, should test 78 octane number or more.

The surveys made by the U. S. Bureau of Mines indicate that there is comparatively little gasoline sold on the market which is inferior to the recognized standard motor fuel. Gasoline has been so plentiful for several years that competition has brought about a condition where the volatility of the motor fuel sold throughout the United States is much superior to the grade known as U. S. Motor gasoline. The tendency of the refiner is to increase both volatility and antiknock value through improved refining methods and the selection of the crude oil. The automobile manufacturer has co-operated so that now the quality of gasoline is much superior for motor fuel than it has ever been and excellent performance is obtained under service conditions.

Prices for gasolines are shown each week in The Oil and Gas Journal under "Refinery and Crude Prices."

## Various Forms of Carbon in Petroleum Products Defined

**What are the exact definitions of the terms free carbon and fixed carbon? Is the latter synonymous with combined carbon? In what way are the types of carbon mentioned related to the carbon content of what is ordinarily called carbon residue?—R. F. C.**

The term free carbon may be applied to that kind of carbon which may be found in suspension in an oil, or in such preparations as printers' ink. The density of smoke is due to the presence of unburned or free carbon. In these examples the carbon is not combined with any other substance, the opposite to the condition where carbon is combined, as with hydrogen and oxygen in ordinary sugar, and may be extracted by suitable mechanical means in the form of the several varieties of commercial products called oil black, carbon black, lamp black, etc.

Fixed carbon and combined carbon may be synonymous but fixed carbon may have a special meaning as it is a term long applied to the approximate analysis of the solid fuels, such as coal and coke. That part of petroleum coke which is readily driven off in the furnace at a relatively low temperature in the form of gases and smoke is designated volatile carbon or volatile matter. The remaining carbon, the important source of heat, is quite stable and is for this reason called fixed carbon. The methods used for the manufacture of coke make use of the principle of partial combustion, in order to drive off the larger part of the volatile matter, so that coke is always characterized by a high percentage of fixed carbon, with very little volatile matter. Another meaning for fixed carbon, although combined carbon is better, is to where the carbon is united with other elements; the hydrocarbons are compounds containing carbon and hydrogen.

The term carbon residue, as applied to lubricating oils and other petroleum products, is quite technical in meaning. It has a special meaning, as a means for the grading of oils, in connection with an arbitrary analytical procedure. The method requires that a sample of oil shall be enclosed in a specified apparatus and heated under prescribed conditions for a definite time. The residue, resembling a soft coke, is called the carbon residue. It may contain some volatile matter, but is essentially fixed carbon. When the combustion of the carbon residue, or fixed carbon, is permitted to go to the extreme, there remains as a final residue the mineral ash.

## Southwest Texas Proven Areas

(Continued from Page 59)

Los Olmos Oil & Gas Co.'s No. 44 Kelsey Bass, 200 ft. from E line, 120 ft. from N line of SE of NW Sec. 7, Porcions 75, 76, 77, Camargo ..... Spudded in.
Los Olmos Oil & Gas Co.'s No. 45 Kelsey Bass, 500 ft. from E line, 120 ft. from N line of SE NW Sec. 7, Porcions 75, 76, 77, Camargo ..... Location.
Los Olmos Oil & Gas Co.'s No. 46 Kelsey Bass, 800 ft. from E line, 120 ft. from N line of SE NW Sec. 7, Porcions 75, 76, 77, Camargo ..... Location.
Los Olmos O. & G. Co.'s No. 47 Kelsey Bass, 200 ft. to E line, 105 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
Los Olmos O. & G. Co.'s No. 48 Kelsey Bass, 425 ft. to E line, 105 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
Los Olmos O. & G. Co.'s No. 49 Kelsey Bass, 650 ft. from E line, 105 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
Los Olmos O. & G. Co.'s No. 51 Kelsey Bass, 425 ft. to E line, 330 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
Los Olmos O. & G. Co.'s No. 52 Kelsey Bass, 650 ft. to E line, 330 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
Los Olmos O. & G. Co.'s No. 53 Kelsey Bass, 250 ft. to E line, 555 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... T.D. 485 ft; 10 bbls.
Los Olmos O. & G. Co.'s No. 54 Kelsey Bass, 475 ft. to E line, 555 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
Los Olmos O. & G. Co.'s No. 55 Kelsey Bass, 700 ft. to E line, 555 ft. to S line of NE NW Sur. 7, Por. 75-76-77 ..... Location.
R. A. Mitchell's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW SE of Sur. 8, Subd. Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 212 ft.; standing.
J. F. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... T.D. 305 ft.; standing.
C. L. Sinclair's No. 2 Kelsey Bass, 150 ft. to S line, 1,050 ft. to W line of SW of SW of Sur. 5, Porcions 75, 76, 77 ..... T.D. 530 ft.; drlg.
Tilden & Jones' No. 1 E. Cuellar, 450 ft. to N line, 750 ft. to E line of Share 11, Porcion 75 ..... T.D. 210 ft; abd.
Tollen, Floyd & Warner's No. 1 Seabury, 450 ft. from S line, 814 ft. from E line of 80-ac. tract in Share 5, W part of Porcion 75 ..... T.D. 390 ft; abd.; hole lost.
Wells et al's No. 1 Lanegraf, 150 ft. from N and E lines of SW of SW of Sur. 7, Porcions 75, 76, 77, Camargo ..... T.D. 387 ft.; being drilled by McCormick.

### RIO GRANDE CITY POOL—STARR COUNTY

Mundy and others' No. 1 Salines, 190 ft. to S and W lines of Blk. 12, Share C-38, Porcions 80 and 81, Camargo ..... T.D. 1,460 ft.; standing.

### LAUREL POOL—WEBB COUNTY

Dyck Oil Co.'s No. 2 Garcia & Villareal, 330 ft. W of No. 1 ..... T.D. 2,179 ft; bailing.
L. M. Kaiser's No. 1 Garcia & Villareal, 150 ft. to N and W lines of Blk. 2, Sur. 1,099 ..... T.D. 1,780 ft; testing sand.
O. W. Killam's No. 1 Garcia & Villareal, 150 ft. to N and W lines of SE NE Sur. 1,110 ..... T.D. 2,375 ft; drlg.
Magnolia Pet. Co.'s No. 1 Garcia & Villareal, 150 ft. from N and W lines of NW NE of Sur. 1,100 ..... T.D. 2,206 ft; bailing.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ..... T.D. 2,080 ft.; standing.
G. B. Parr's No. 1 Gates et al, 330 ft. to S and E lines of Blk. 3, Sur. 272 ..... Derrick.
Reward Oil Co., Sur. 768 ..... Location. 1 mi. SW of Dyck.
Reward Oil Co.'s No. 1 Laurel, 245 ft. to S and E lines of Blk. 16, Sur. 271 ..... T.D. 2,212 ft; pumping 6 bbls. hrly.
Reward Oil Co.'s No. 1 Caltex Royalty Co., 150 ft. from N and W lines of Blk. 24, Sur. 768 ..... T.D. 2,155 ft; drlg.
Reward Oil Co.'s No. 1 Garcia & Villareal Co., 330 ft. from N and W lines of NW SE of Sur. 1,100 ..... Location.
R. R. R. Oil Co.'s No. 1 Garcia & Villareal, 330 ft. to N and W lines of Blk. 11, Sur. 338 ..... Location.
Sal-Mar Oil Corp.'s No. 1 Vela, 660 ft. from NW and SW lines of Blk. 16, Sur. No. 1,011 ..... Location.
Smidon Oil & Gas Co.'s No. 1 Vela, 450 ft. to S line, 150 ft. to S line of Blk. 14, Sur. 263 ..... T.D. 3,080 ft; to plug back to 1,818 ft.
Smith & Story's (Wolcott & Rehmet) No. 1 Sarah Lloyd, 600 ft. from W line, 150 ft. from S line of SW SE (Blk. 14), Sur. 23 ..... Derrick.
Geo. E. Smith's No. 1 Garcia & Villareal, NW cor. of Sec. 11, Sur. 338 ..... Location.
South Texas Oil Co.'s No. 1 Garcia & Gates, Sur. 272 ..... Location.
South Texas Oil Co.'s No. 1 Garcia & Villareal, Sur. 1,099 ..... Location.
South Texas Oil Co.'s No. 5 Laurel, Blk. 9, Sur. 270 ..... T.D. 1,134 ft; drlg.
South Texas Oil Co.'s No. 10 Laurel, 511 ft. to E line, 150 ft. to S line, Blk. 16, Sur. 271 ..... T.D. 400 ft; drlg.
Whisenant & Trenchard's No. 1 Duval County Ranch Co., 150 ft. to N and W lines, Blk. 17, Zapata County School Lands, Sur. 101 ..... Location.

### MOCA POOL—WEBB COUNTY

Moca Oil Co.'s No. 2 Duval County Ranch Co., 1,650 ft. to N line, 638 ft. to W line of Blk. 22, Share 3, Zapata County school lands ..... T.D. 1,600 ft; drlg.

### CAROLINA-TEXAS POOL—WEBB COUNTY

Foster Barnsley's No. 2-F Webster, 165 ft. from N and E lines of SE of NW of Sur. No. 684 ..... T.D. 2,588 ft; abd. location.

### ESCOBAS POOL ZAPATA COUNTY

Norden & Morris' No. 4 E. B. de los Santos, 200 ft. to NE lines, 1,377 ft. to SE lines, Share 7, Comitas grant ..... Location.
Norden & Morris' No. 4 Pedro de los Santos, 200 ft. to SW lines, 1,377 ft. to SE lines, Share 6, Comitas grant ..... Spudded in.
The Texas Co.'s No. 17 Measles ..... Making location.
The Texas Co.'s No. 18 Measles, 3,342 ft. to SE lines, 795 ft. to SW lines of Cerrito Blanco grant ..... T.D. 100 ft; drlg.
The Texas Co.'s No. 19 Measles, 450 ft. N 74 deg. E of No. 15 Cerrito Blanco grant ..... Location.

## Gulf Coast Fields and Wildcats

(Continued from Page 46)

The Texas Co.'s No. 9 Wilburn, Henry Griffith League, 580 ft. E of NW cor. and 50 ft. S of N line ..... Drlg. salt 1,652 ft; top of salt 1,392 ft.
Texas Gulf Prod. Co.'s No. 11-A Kirby, Henry Griffith League, 1,090 ft. from W line and 225 ft. from S line of "A" lease ..... Drlg. shale 6,180 ft.
Texas Gulf Prod. Co.'s No. 12-H Kirby, Henry Griffith League, 429 ft. W of No. 8-H and 65 ft. N of S line.. Drlg. salt 2,180 ft.
Texas Gulf Prod. Co.'s No. 2 O. K. Winfrey, W. D. Smith Sur., 295 ft. N of SW cor. of A. E. Barber lease, 100 ft. W of E line of Winfrey lease ..... Salt 6,208-53 ft; D.S. stuck 4,700 ft; sidetracked and drlg. rock 3,919 ft.
Sun Oil Co.'s No. 15 J. Wilburn, Wm. Hodges Sur., 343 ft. from N line, 420 ft. from W line of lease ..... Drlg. shale 4,129 ft.
The Texas Co.'s No. 3 Lawrence fee, Henry Griffith League, 740 ft. W of E line in center of tract..... Drlg. shale 3,815 ft.
Yount Lee Oil Co.'s No. 4-A Zadie Fisher, Wm. Bloodgood Sur., 301 ft. from W line, 96 ft. from S line of tract ..... Hard sand 6,508 ft; cmtd. 5 9/16-in. csg. 6,488 ft.

### RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 3 Gubbels, Samuel Kennedy Sur., 1,000 ft. N of No. 1 and 300 ft. E of W line of 100-ac. tract ..... Set 158 ft. of 4½-in. screen 5,300 ft; comp. 480 bbls. P.L. oil, 650 lbs.; ⅝-in. choke.
Gulf Prod. Co.'s No. 1-A Gubbels, Samuel Kennedy Sur., 506 ft. N, 426 ft. E of SW cor. of 208-ac. tract..... Drlg. gumbo 2,493 ft.
Gulf Prod. Co.'s No. 1 Hammerstrom, Samuel Kennedy Sur., 467 ft. N of S line and 466 ft. E of W line of lease ..... Rig.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 10-A F. I. Booth, Samuel Kennedy Sur., 2,779 ft. along N line of lease from SE cor. of J. Gubbels' 100-ac. lease and 485 ft. S at right angles ..... Comp. 50 bbls. per hr.; ½-in. choke; 5,300 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 11-A F. I. Booth, Samuel Kennedy Sur., 6,108 ft. E along N line of J. Rabb Sur., from NW cor. of E½ of survey and 467 ft. N at right angles ..... Location.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 6 George, J. Rabb Sur. ..... Sand showing oil 5,408 ft; cmtd. csg.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-A George, J. Rabb Sur. ..... Derrick.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 11-A Lockwood & Sharp, J. Rabb Sur. ..... Location.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 13-A Lockwood & Sharp, J. Rabb Sur., 4,174 ft. E, 522 ft. S of NW cor. of lease ..... Rig.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 11-B Lockwood & Sharp, J. Rabb Sur., 4,554 ft. from W line, 526 ft. from S line of "B" lease No. 3 ..... Sticky shale 1,261 ft; cmtd. surface csg.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 12-B Lockwood & Sharp, J. Rabb Sur., 1,729 ft. from E line, 1,129 ft. from S line of "B" lease ..... Derrick.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 6 Meyers, Samuel Kennedy Sur., 6,596 ft. E and 439 ft. N of SW cor. of 275-ac. tract ..... Drlg. gumbo 1,176 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 5 T. R. Booth, Samuel Kennedy Sur. ..... Comp. 50 bbls. per hr.; ⅛-in. choke; 5,300 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 1 R. A. and O. H. Wolters, Robt. Peebles Sur., 325 ft. S and 500 ft. W of NE cor. of 1,000-ac. tract ..... Derrick.
Humble O. & R. Co.'s No. 3 Gubbels, Samuel Kennedy Sur., 500 ft. N, 1,350 ft. W of SE cor. 190-ac. lease.. Set 181 ft. of 5-in. screen 5,298 ft; comp. 1,250 bbls.; ⅝-in. choke.
Humble O. & R. Co.'s No. 4 Gubbels, Samuel Kennedy Sur., 1,400 ft. N, 2,460 ft. W of SE cor. of 100-ac. lease ..... Spudded.
Humble O. & R. Co.'s No. 5 Gubbels, Samuel Kennedy Sur., 1,460 ft. N, 1,476 ft. W of SE cor. of 100-ac. tract ..... Location.
The Texas Co.'s No. 4 Wolters, Samuel Kennedy Sur., 1,850 ft. N, 300 ft. W of SE cor. of lease ..... Cored sand showing oil 5,207 ft.

### SUGARLAND—FORT BEND COUNTY

Koimm Prod. Co.'s No. 1 Peterson, Wm. Littel Sur., 100 ft. SE, 100 ft. SW of NE cor. of tract ..... Sand and shale 3,756 ft; to set csg.

### HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 3 Broussard, M. Dunman Sur., 150 ft. E of center of W line of tract ..... Drlg. shale and sand 4,432 ft.
Yount Lee Oil Co.'s No. 33 Cade, N. Fitzsimmons Sur., 3,505 ft. from N line, 1,615 ft. from E line ..... Drlg. anhydrite 3,900 ft.
Yount Lee Oil Co.'s No. 34 Cade, N. Fitzsimmons Sur., 856 ft. S of No. 33 ..... Derrick.
Yount Lee Oil Co.'s No. 1 Mathais fee, 150 ft. from S line, 192 ft. from E line of 23.44-ac. tract in Sarah Reeves Subd., Martin Dunman Sur. ..... Shale and gyp 4,590 ft.
Yount Lee Oil Co.'s No. 14 Smith, Martin Duman Sur., 900 ft. W of No. 12 ..... Drlg. sand and shale 3,210 ft.

### SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 92 Jorditt, C. F. Jorditt Sur., 200 ft. S of No. 90 ..... Drlg. rock 1,604 ft.

### SOUR LAKE—HARDIN COUNTY

W. E. McKinney's No. 1 Maco Stewart, S. Jackson Sur., center of 5-ac. tract out of Maco Stewart 50 acres ..... No report.
M. M. Miller's No. 1 Libbie Oil Co., Stephen Jackson Sur., 1,380 ft. NW of Houston Prod. Co.'s No. 1 Merchant ..... Derrick.

### ARIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 1-Y Ariola fee, 5,610 ft. from W line, 5,610 ft. from N line of Ariola Sur. ..... T.D. 5,308 ft; sidetracked 1,282 ft; and drlg. hard sand 5,025 ft.
Houston Oil Co.'s No. 1-Z Ariola fee, 3,000 ft. from W line, 5,610 ft. from N line of Ariola Sur. ..... Drlg. sticky shale 6,126 ft.
Republic Prod. Co.'s No. 3 Ariola fee, Ariola Sur., 660 ft. due S of Gulf's No. 1-A Kirby ..... Location.

### HUMBLE—HARRIS COUNTY

Sun Oil Co.'s No. 66 River, Robert Dunman Sur., 1,722 ft. from S line, 284 ft. from E line of lease ..... Derrick.
Sun Oil Co.'s No. 69 River, Robert Dunman Sur., 1,668 ft. from S line and 374 ft. from E line of lease..... Comp. flowing 100 bbls. 1,270 ft.
Sun Oil Co.'s No. 70 River, Robert Dunman Sur., 1,222 ft. from S line and 284 ft. from W line of lease.... Rig.

### MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 4 Minntex, 165 ft. S, 120 ft. W of NE cor. of Blk. 193, Wm. Lovett Sur. ..... Gumbo 1,255 ft; cmtd. 12½-in. csg.
Crown-Framer Oil Co.'s No. 2-A Siadona, Wm. Lovett Sur., 500 ft. E, 100 ft. N of SW cor. of lease ..... Rig.
Leon Wilkerson's No. 1 Irwin, Wm. Lovett Sur., 300 ft. N of Humble's No. 1 Irwin ..... Derrick.

### PIERCE JUNCTION—HARRIS COUNTY

Gulf Prod. Co.'s No. 36 Taylor, James Hamilton Sur. No. 52, 650 ft. N of S line of survey, 100 ft. W of Rock Drlg. Co.'s No. 2 Hooks ..... Sand 3,835-44 ft; cmtd. 7-in. csg. 3,818 ft.
Rio Bravo Oil Co.'s No. 26-A Settegast, J. Kopman Sur., 1,210 ft. from N line, 750 ft. from E line of "A" lease ..... Drlg. shale and sheil 5,600 ft.

### FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 6 Burrell, Wm. Smith Sur., 1,610 ft. N, 300 ft. E of SW cor. of 232-ac. tract ..... T.D. 4,954 ft; abd.
Lowrie & Young's No. 1 Junker, Wm. Smith Sur., 125 ft. N, 100 ft. E of Gulf Prod. Co.'s No. 1 Junker in 260-ac. tract ..... No report.

### ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 2 Moores Bluff (D.D.), M. Duncan Sur. ..... Drlg. 3,310 ft.
Cranfill-Reynolds Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line, 2,100 ft. from N line of 632-ac. tract ..... Cmtd. 9⅝-in. csg. 6,164 ft.

### HULL—LIBERTY COUNTY

Carpenter & Parr's No. 2 Antilley, Jesse Devore Sur., 321 ft. W, 250 ft. S of NE cor. of 20-ac. lease ..... Derrick.
Eclipse Oil Co.'s No. 1 Gordon, Jesse Devore Sur., 50 ft. out of NE cor. of Empire 13-ac. lease ..... Rigging.

(Continued on Page 128)

# MARKET RECORD OF OIL SECURITIES

By A. E. Mockler

NEW YORK, Jan. 23.—Oil shares were adversely affected last week by the further cuts in crude oil prices, but after the first effects of the reduction had worn off, the market rallied somewhat. While the lower crude prices mean inventory losses and will adversely affect the earning position of producing companies, it was pointed out that the effect upon the financial position of the large integrated companies will not be so drastic, and that the opportunity to fill storage with cheap crude may later balance the situation in favor of such companies.

Investment buying of the dividend-paying oils is indicated by recent trading in the inactive issues, several of which, including Chesebrough Manufacturing, Standard of Ohio preferred, Southwest Pennsylvania Pipe Lines, and Buckeye Pipe Line, have shown strength.

Important changes in the presentation of balance sheets for corporations are suggested by the committee of accountants which has been co-operating with the New York Stock Exchange in developing plans for the clarification of corporation reports for the purpose of providing more detailed information for investors.

The recommendations of the accountants' committee suggests that in balance sheets, in respect of capital assets, the statement should show what classes of items are charged to property account (whether only new properties or also replacements and improvements); whether any charges in addition to direct cost, either for overhead expense, interest or otherwise are made to property accounts; upon what classes of property, on what basis, and at what rates provision is made for, or in lieu of depreciation; what classes of expenditures, if any, are charged against reserves for depreciation so created; how the difference between depreciated value and realized or realizable value is dealt with on the sale or abandonment of units of property, and on what basis property purchased from subsidiary companies is charged to property account (whether at cost to subsidiary or otherwise).

The report also recommends that the basis of valuation of inventories should be shown in considerable detail. The balance sheet should outline the reduction to the lower of cost or market and should show how the inventories so reduced are treated in subsequent periods. Intercompany profits on goods are also to be shown.

It was further recommended that the statements of companies show the reasons for the segregation of some securities into current assets accounts and the placement of others in other accounts.

In conjunction with receivables, the report suggests that statements should show what provision is made for future collections.

Statements should also show, the accountants recommended, what classes of expenditures are in the company's practice deferred and what procedure is followed in their amortization. Deferred charges, the report indicates, are deemed of great importance because of their effect on earnings.

Details on unliquidated claims and data on the method of handling them are also asked for.

### Gilmore Gasoline

Gilmore Gasoline Plant No. 1 has declared the usual monthly dividend of 20 cents per share on its $10 par stock, payable January 25 to stock of record January 22.

### Cunningham Gas

Cunningham Natural Gas Co. has declared a quarterly dividend of 1½ cents per share on its $1 par "A" stock, payable January 10 to stock of record December 15.

### Cosden Oil

The reorganization committee of Cosden Oil Co. is expected to present shortly to the Federal Court at Wilmington, Del., a reorganization plan. Members of the committee indicate that the reorganization can be accomplished promptly with approval of the court.

### Texas Gulf Producing

Texas Gulf Producing Co. has declared a 2½ per cent stock dividend, payable February 25 to stock of record February 6.

### Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb based on closing quotations for Wednesday, was as follows:

| | | | |
|---|---|---|---|
| July 13 | 12.19 | Oct. 19 | 14.37 |
| July 20 | 13.47 | Oct. 26 | 14.42 |
| July 27 | 14.60 | Nov. 2 | 13.99 |
| Aug. 3 | 15.13 | Nov. 9 | 14.36 |
| Aug. 10 | 17.21 | Nov. 16 | 15.15 |
| Aug. 17 | 16.21 | Nov. 23 | 14.61 |
| Aug. 24 | 17.19 | Nov. 30 | 14.04 |
| Aug. 31 | 17.24 | Dec. 7 | 13.31 |
| Sept. 7 | 18.50 | Dec. 14 | 14.21 |
| Sept. 14 | 15.90 | Dec. 21 | 13.53 |
| Sept. 21 | 16.72 | Dec. 28 | 13.50 |
| Sept. 28 | 15.55 | Jan. 4 | 13.89 |
| Oct. 5 | 14.44 | Jan. 11 | 14.52 |
| Oct. 11 | 14.31 | Jan. 18 | 13.76 |

### Italo Petroleum

Federal Judge William P. James, of Los Angeles, has granted a judgment and decree authorizing a cash settlement of $125,000 for judgments totaling $698,000, including contingent liabilities of $297,000, against the Italo Petroleum Corp.

## Independent Oils on New York Curb

**Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.**

(Complete record week ending Jan. 14)

| 1933 High | 1933 Low | Week ending Jan. 14 Sales | Week ending Jan. 14 High | Week ending Jan. 14 Low | Close Jan. 13 | Stocks— | | Outstanding capital | Par value | Div. rate | Payable or last paid | 1929 High | 1929 Low | 1930 High | 1930 Low | 1931 High | 1931 Low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ¾ | ¼ | 500 | ⅝ | ⅝ | ¼ | American Maracaibo | (sh) | 700,000 | N.P. | .... | ..... | 8⅝ | 1⅛ | 4½ | ½ | 1¾ | ¼ |
| 3¾ | ⅝ | 100 | 1⅝ | 1⅝ | .. | Arkansas Natural Gas | (sh) | 4,084,225 | N.P. | .... | ..... | 26 | 3⅜ | 16⅜ | 4⅝ | 6½ | 1⅜ |
| 3⅜ | ½ | 6,200 | 2 | 1½ | .. | Arkansas Natural Gas "A" | (sh) | 3,522,521 | N.P. | .... | ..... | 24¾ | 6½ | 16⅝ | 4⅝ | 6¾ | 1⅞ |
| 5⅝ | 1½ | 100 | 2¾ | 2¾ | .. | Arkansas Natural Gas pfd. | (sh) | 2,193,000 | $10 | .... | 4- 1-32 | 9 | 4 | 8⅛ | 6¼ | 7 | 3⅛ |
| 9¾ | 6¾ | 400 | 7⅝ | 7⅝ | .. | British American Oil Corp. | (sh) | 2,622,642 | N.P. | 20cQ | 12-14-32 | 62 | 7⅞ | 23 | 13⅝ | 16⅞ | 6¼ |
| ⅜ | ¼ | 100 | ⅜ | ⅜ | .. | Carib Syndicate | | $131,250 | 25c | .... | ..... | 4⅞ | 1 | 2⅜ | ⅝ | 2⅜ | ¼ |
| 6⅞ | 1¼ | 67,300 | 3¼ | 2¾ | 2¾ | Cities Service | (sh) | 36,979,065 | N.P. | .... | 6- 1-32 | 68½ | 20 | 44¼ | 13 | 20¾ | 5 |
| 53⅜ | 10 | 1,200 | 17½ | 16¼ | 15¼ | Cities Service pfd. | (sh) | 1,125,931 | N.P. | .... | 6- 1-31 | 98¾ | 84 | 93⅞ | 78¼ | 84¾ | 35⅝ |
| ¼ | 1/16 | 1,900 | 1/16 | 1/16 | .. | Colombia Syndicate | | 3,250,000 | N.P. | .... | ..... | .. | .. | 21 | 3⅝ | 7⅛ | 1 |
| 2⅛ | ½ | 1,100 | 1⅛ | 1 | ⅞ | Columbia Oil & Gasoline v.t.c. | (sh) | $2,000,000 | $1 | .... | ..... | 2 | ½ | ⅝ | ⅛ | ½ | 1/16 |
| 1¼ | ¼ | No sales | .. | .. | .. | Colon Oil | (sh) | 2,200,000 | N.P. | .... | ..... | 15 | 3⅜ | 8¼ | 1⅛ | 3⅛ | ¼ |
| 2 | 1 | No sales | .. | .. | .. | Consolidated Royalty Oil Co. | | $5,527,880 | $10 | 5cQ | 1-25-33 | 11¼ | 2½ | 5⅞ | 2 | 2¾ | 1 |
| 2⅞ | ¼ | 500 | 1⅝ | 1⅝ | .. | Cosden Oil | (sh) | 323,950 | N.P. | .... | ..... | 135 | 42 | 74¾ | 1¼ | 3¾ | ⅝ |
| 7⅛ | 1⅝ | No sales | .. | .. | .. | Darby Petroleum | (sh) | 609,696 | N.P. | .... | 10-15-30 | 26 | 6½ | 21⅝ | 4¼ | 5 | 1⅜ |
| 3 | 1 | No sales | .. | .. | .. | Derby Oil & Refining | (sh) | 500,000 | N.P. | .... | ..... | 11 | 2 | 11 | 2 | 6 | 1½ |
| 24½ | 10½ | No sales | .. | .. | .. | Derby Oil & Refining pfd. | | 48,500 | N.P. | .... | ..... | 44 | 20¾ | 60 | 30 | 40½ | 25 |
| 44¾ | 23 | 3,200 | 29¼ | 27 | 27 | Gulf Oil Corp. | (sh) | 4,504,921 | $25 | .... | 10- 1-31 | 209 | 115 | 166⅞ | 58½ | 75½ | 25⅝ |
| 4½ | 1½ | No sales | .. | .. | .. | Indian Terr. Illum. Oil "B" | (sh) | 7,000,037 | N.P. | .... | ..... | .. | .. | 53½ | 12⅝ | 16⅞ | 5 |
| ¼ | 1/16 | 2,000 | ⅛ | 1/16 | .. | Intercontinental Petroleum | | $5,682,000 | $5 | .... | ..... | 2⅞ | ⅜ | 1¾ | ⅜ | ⅝ | ⅛ |
| 1 | ⅜ | 100 | ⅝ | ⅝ | .. | Kirby Petroleum | (sh) | 750,000 | N.P. | .... | ..... | 3⅝ | 1¼ | 3 | ⅞ | 1⅞ | ¼ |
| ⅝ | ⅛ | No sales | .. | .. | .. | Leonard Oil & Development | | $50,000,000 | $25 | .... | ..... | 14⅞ | 2½ | 5 | ¾ | 2 | ½ |
| 2½ | ½ | 600 | ¾ | ¾ | ⅝ | La. Land & Exp. | (sh) | 3,000,000 | N.P. | .... | ..... | 6⅛ | 1 | 4¾ | ½ | 1½ | ¼ |
| 3½ | ⅞ | 100 | 1⅝ | 1⅝ | .. | Lion Oil & Refining | (sh) | 250,000 | N.P. | .... | 10-27-30 | 38⅞ | 18 | 29 | 4⅞ | 6¾ | 1½ |
| 11 | 3⅜ | 1,500 | 7⅝ | 7¼ | 7 | Lone Star Gas | (sh) | 5,000,000 | N.P. | 16cQ‡ | 9-30-32 | 67⅞ | 28 | 55⅞ | 19⅝ | 25 | 5½ |
| 8 | 3⅜ | No sales | .. | .. | .. | Margay Oil Corp. | | 160,000 | N.P. | 25cQ | 7-11-32 | 38½ | 14 | 16 | 3 | 5 | 1⅞ |
| 5¼ | 1⅝ | 500 | 3⅛ | 3 | .. | Memphis Natural Gas | (sh) | 920,000 | N.P. | .... | 4-15-32 | 24 | 8⅛ | 22¼ | 7½ | 12⅛ | 4½ |
| 3⅜ | 1½ | No sales | .. | .. | .. | Mexico-Ohio Oil Co. | | 500,000 | N.P. | .... | ..... | 6⅜ | 2¼ | 7½ | 1⅜ | 4⅞ | 1½ |
| ⅜ | ⅛ | 200 | ⅛ | ⅛ | .. | Mountain & Gulf | | $4,000,000 | $1 | .... | 4-15-31 | 1½ | ½ | ¾ | ⅜ | ½ | ⅛ |
| 4⅜ | 2¼ | 5,600 | 3¼ | 2½ | 2⅞ | Mountain Producers | | $1,682,182 | $10 | 20cQ | 1- 3-33 | 22⅞ | 7 | 12⅛ | 3¾ | 5⅞ | 2 |
| 14⅝ | 8 | 1,500 | 13¼ | 13 | 13⅛ | National Fuel Gas | (sh) | 3,810,183 | N.P. | 25cQ | 1-16-33 | 43⅞ | 28 | 41⅜ | 19⅜ | 26½ | 9⅜ |
| ⅞ | ⅜ | 400 | ⅝ | ½ | ½ | New Bradford Oil | | $7,224,186 | $5 | .... | 4-15-31 | 5 | 2½ | 3½ | 1⅛ | 1½ | ½ |
| 1¼ | ⅜ | No sales | .. | .. | .. | New Mexico and Arizona | | $1,000,000 | $1 | .... | ..... | 9⅜ | 2¼ | 7¼ | 1½ | 3 | ⅜ |
| 1½ | ⅝ | No sales | .. | .. | .. | North Central Texas | (sh) | 262,446 | $5 | .... | 9- 2-30 | 18½ | 6¼ | 11¼ | 2½ | 3¼ | ⅜ |
| ⅜ | 1/16 | 100 | ⅛ | ⅛ | .. | North European Oil | (sh) | 1,372,391 | N.P. | .... | ..... | .. | .. | 6¼ | ⅝ | 2⅛ | ¼ |
| 8 | 3 | No sales | .. | .. | .. | Pacific Western Oil | (sh) | 1,000,000 | N.P. | .... | ..... | 26⅝ | 12⅛ | 19½ | 5½ | 15 | 2⅛ |
| ⅝ | 1/16 | No sales | .. | .. | .. | Pantepec Oil | (sh) | 1,595,500 | N.P. | .... | ..... | 10½ | 1⅞ | 4⅜ | ⅞ | 2 | ⅜ |
| ½ | 1/16 | No sales | .. | .. | .. | Reiter-Foster | (sh) | 388,584 | N.P. | .... | 12- 2-29 | 8½ | 1⅛ | 5⅜ | 1 | 3⅛ | ¼ |
| 1 | ⅛ | No sales | .. | .. | .. | Richfield Oil pfd. x.w. | (sh) | 399,950 | $25 | .... | ..... | 31½ | 22 | 23½ | 6½ | 11 | ¼ |
| 2¼ | ⅝ | No sales | .. | .. | .. | Ryan Consolidated | (sh) | 296,931 | N.P. | .... | ..... | 11 | 2 | 8⅝ | 2 | 3 | ⅜ |
| ⅞ | ⅛ | No sales | .. | .. | .. | Salt Creek Consolidated | (sh) | 1,286,300 | $10 | .... | 4- 1-31 | 5⅞ | 1⅞ | 2½ | ½ | 1⅜ | ⅛ |
| 5½ | 2¼ | 1,800 | 4¼ | 4 | 4 | Salt Creek Producers | (sh) | 1,496,859 | $10 | 25c | 2- 1-33 | 25⅞ | 9 | 15¼ | 5¼ | 7⅜ | 2⅜ |
| ⅝ | ¼ | 800 | 1/16 | 1/16 | .. | Sunray Oil | (sh) | 1,163,185 | $5 | .... | 4-15-31 | 12 | 5⅝ | 10 | 2 | 5¼ | ¼ |
| 10½ | 4½ | 500 | 8 | 7⅝ | .. | Texon Oil & Land | (sh) | 936,036 | N.P. | 25c† | 12-30-32 | 23 | 7⅛ | 19½ | 8 | 12⅞ | 2½ |
| 1/16 | ⅛ | 100 | 1/16 | 1/16 | .. | Venezuelan Petroleum | (sh) | 755,090 | $5 | .... | 2-15-30 | 6½ | 1⅜ | 4½ | ⅝ | 1⅞ | ¼ |
| 2⅜ | 1¼ | 100 | 2⅛ | 2⅛ | .. | Woodley Petroleum | | $500,000 | $1 | .... | 3-31-29 | 9½ | 2 | 5 | ½ | 3½ | 1¼ |
| 1⅝ | ½ | 1,300 | ⅝ | ½ | .. | Y Oil & Gas | | 100,000 | N.P. | .... | ..... | 2⅞ | ½ | 2½ | ⅝ | 2¼ | ¼ |

*Ex-dividend. †Plus extra dividend of 25 cents. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

of America. The compromise will reduce Italo's liabilities from approximately $1,300,000 to slightly more than $890,000.

### Union Oil

Union Oil Co. of California has declared the regular quarterly dividend of 25 cents per share on its $25 par common stock, payable February 10 to stock of record January 19.

### Eureka Pipe Line

Eureka Pipe Line Co. has declared the regular quarterly dividend of $1 per share, payable February 1 to stock of record January 16.

### Richfield

Forming a basis for adjustment of the prolonged controversy between the Government and Pan American Petroleum Co., an audit covering returns from 660 acres of oil land in Kern County, California, has been filed in Federal court at Los Angeles by William C. McDuffie, receiver in equity for Richfield Oil Co. of California. The audit indicated that the company received $9,305,635 from the sale of products taken from the leases granted the company in 1921 by Albert B. Fall, then Secretary of the Interior. A refund of expenses on the property, amounting to $27,969, is claimed by Richfield, which a few years ago acquired Pan American Petroleum Co. Government attorneys have announced their intention of asking the full amount of money realized from the sale of petroleum products from the land during the litigation.

## Standard Oil Stocks on New York Curb

**Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.**

(Complete record week ending Jan. 14)

| 1933 High | 1933 Low | Week ending Jan. 14 Sales | Week ending Jan. 14 High | Week ending Jan. 14 Low | Close Jan. 18 | Stocks— | | Outstanding capital | Par value | Div. rate | Payable or last paid | 1929 High | 1929 Low | 1930 High | 1930 Low | 1931 High | 1931 Low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 6 | No sales | .. | .. | .. | Borne Scrymser | | $1,000,000 | $25 | .... | 10-15-30 | 46½ | 25 | 25 | 11¼ | 16 | 6 |
| 35 | 17½ | 300 | 27 | 25 | .. | Buckeye Pipe Line | | $10,000,000 | $50 | 75cQ | 12-15-32 | 74½ | 55 | 69 | 39⅞ | 56 | 30 |
| 90 | 53 | 50 | 90 | 90 | .. | Chesebrough Mfg. | | $3,000,000 | $25 | $1Q‡ | 12-30-32 | 210 | 130 | 184⅞ | 104¼ | 129½ | 75 |
| 3⅛ | 1⅜ | 3,000 | 2¾ | 2⅝ | .. | Creole Petroleum | (sh) | 5,977,872 | N.P. | .... | ..... | 11¾ | 5⅜ | 7⅞ | 3 | 3⅞ | 1⅜ |
| 35 | 18 | 150 | 28½ | 28¼ | 27½ | Eureka Pipe Line | | $5,000,000 | $100 | $1Q | 2- 1-33 | 70½ | 40 | 54¾ | 26 | 36 | 19 |
| 55 | 35⅝ | 900 | 45 | 44 | 44 | Humble Oil & Refining | | $74,103,300 | $25 | 50cQ | 1- 1-33 | 128 | 74⅛ | 119 | 57¼ | 72 | 44¼ |
| 10⅞ | 6¼ | 2,200 | 8¼ | 8 | 7¾ | Imperial Oil of Canada | (sh) | 26,557,496 | N.P. | 12½cQ | 12- 1-32 | 41 | 22 | 30 | 15 | 18¼ | 7⅝ |
| 7½ | 2¾ | 100 | 3½ | 3½ | .. | Indiana Pipe Line | | $3,000,000 | $10 | 10cS.A.§ | 11-15-32 | 41⅞ | 26 | 41 | 14½ | 21⅜ | 5½ |
| 12¼ | 8 | 5,300 | 10¾ | 10⅜ | 10¼ | International Petroleum | (sh) | 14,247,088 | N.P. | 25cQ | 12-15-32 | 30⅜ | 15 | 24 | 11⅜ | 15½ | 7⅜ |
| 10½ | 6 | 200 | 7½ | 7⅛ | .. | National Transit | | $6,362,500 | $12.50 | 20cQ | 12-15-32 | 25⅛ | 10⅛ | 22⅜ | 11½ | 17½ | 5 |
| 5½ | 3⅛ | 2,900 | 5⅞ | 5 | 5⅝ | Northern Pipe Line | | $1,200,000 | $10 | 25c | 1- 2-33 | 63 | 41 | 54 | 26¼ | 35½ | 20 |
| 16½ | 9⅝ | 200 | 11⅜ | 11¼ | .. | South Penn Oil | | $30,000,000 | $25 | 25cQ | 12-30-32 | 60¼ | 35⅛ | 45⅞ | 16⅛ | 23⅞ | 9⅛ |
| 10 | 3¾ | No sales | .. | .. | .. | Southern Pipe Line | | $1,000,000 | $10 | 15cQ | 12- 1-32 | 22½ | 13 | 20⅞ | 8⅝ | 17 | 7 |
| 37 | 27 | 50 | 33 | 33 | .. | Southwest Pennsylvania Pipe Line | | $1,750,000 | $50 | $1Q | 12-31-32 | 70 | 60 | 64 | 32 | 42½ | 25 |
| 25⅛ | 13⅛ | 24,100 | 21⅞ | 21⅝ | 21½ | Standard Oil of Indiana | | $424,914,895 | $25 | 25cQ | 12-15-32 | 63 | 45 | 59⅞ | 30 | 38½ | 13⅛ |
| 15⅞ | 8⅛ | 2,400 | 11¼ | 10⅝ | 11 | Standard Oil of Kentucky | | $25,654,516 | $10 | 30cQ | 12-31-32 | 46⅜ | 29 | 40½ | 18⅝ | 23⅝ | 12⅛ |
| 19 | 10¼ | 200 | 14¼ | 14 | .. | Standard Oil of Nebraska | | $4,770,550 | $25 | 25cQ | 12-20-32 | 50¼ | 40 | 48⅞ | 34⅝ | 36½ | 16 |
| 30⅛ | 15½ | 400 | 21 | 19¼ | .. | Standard Oil of Ohio | | $18,811,675 | $25 | 37½cQ | 1- 3-33 | 129 | 60 | 108½ | 43¼ | 62½ | 29 |
| 2 | 1⅝ | No sales | .. | .. | .. | Swan-Finch Co. | (sh) | 34,480 | $25 | .... | 1-15-29 | 18 | 10 | 10 | 4 | 4½ | 1 |

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus $1 extra. §Plus 5 cents extra.

## Transactions in Oil Shares on New York Stock Exchange

**Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.**

(Complete record week ending Jan. 14)

| 1933 High | 1933 Low | Week ending Jan. 14 Sales | Week ending Jan. 14 High | Week ending Jan. 14 Low | Close Jan. 18 | Stocks— | | Outstanding capital | Par value | Div. rate | Payable or last paid | 1929 High | 1929 Low | 1930 High | 1930 Low | 1931 High | 1931 Low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22¾ | 12 | 2,000 | 22 | 20 | 20⅝ | Amerada Corp. | (sh) | 844,200 | N.P. | 50cQ | 1-31-33 | 42⅝ | 17½ | 31½ | 16½ | 23 | 11¼ |
| 16½ | 6½ | No sales | .. | .. | .. | Associated Oil | | $44,356,180 | $15 | 25cQ | 12-31-32 | 47¼ | 34½ | 51 | 30 | 31 | 8⅝ |
| 21⅞ | 8⅝ | 4,100 | 17 | 16½ | 15⅞ | Atlantic Refining | | $67,416,050 | $25 | 25cQ | 12-15-32 | 77⅞ | 30 | 51⅝ | 16⅝ | 23⅝ | 8⅝ |
| 7 | 3⅝ | 9,600 | 4¼ | 3¾ | 3⅞ | Barnsdall Corp. A | | $11,293,895 | $5 | .... | 5-11-31 | 49½ | 20 | 34 | 8⅝ | 14½ | 4 |
| 21 | 4¼ | 54,800 | 17¾ | 16½ | 16 | Columbia Gas & El. | (sh) | 11,684,220 | N.P. | 25cQ§ | 2-15-33 | 140 | 52 | 87 | 39⅝ | 45⅝ | 11⅝ |
| 12½ | 9 | No sales | .. | .. | .. | Colonial Beacon Oil | (sh) | 1,444,970 | N.P. | .... | 12-22-22 | 32⅞ | 12½ | 20⅜ | 8¾ | 10½ | 7½ |
| 9 | 4 | 13,900 | 5⅞ | 5⅜ | 5¼ | Consolidated Oil Corp. | (sh) | 14,218,835 | N.P. | .... | ..... | .. | .. | .. | .. | .. | .. |
| 9¾ | 3⅝ | 11,800 | 6⅛ | 5½ | 5¾ | Continental Oil of Delaware | (sh) | 4,738,594 | N.P. | .... | 12-15-27 | 47⅞ | 18 | 30½ | 7¾ | 12 | 5 |
| 35¾ | 9½ | 26,100 | 19⅜ | 18⅛ | 17½ | General American Tank Car | (sh) | 751,638 | N.P. | 25cQ | 10- 1-32 | 123¾ | 75 | 111⅞ | 53½ | 73⅛ | 28 |
| 15½ | 4¾ | 1,200 | 7⅞ | 7⅜ | 7⅛ | General Asphalt | (sh) | 413,333 | N.P. | .... | 6-15-32 | 94¾ | 42¼ | 71½ | 22⅜ | 47 | 9⅜ |
| 28¼ | 8¾ | 1,400 | 15¾ | 14½ | .. | Houston Oil | | $24,968,600 | $100 | .... | 10-17-30 | 109 | 26 | 116⅞ | 29¼ | 68½ | 15¾ |
| 2¾ | 1 | 800 | 2 | 2 | .. | Indian Refining | | $12,564,070 | $10 | .... | 10- 1-30 | 53 | 13⅛ | 17 | 2 | 4⅝ | 1⅛ |
| 2¼ | ½ | 100 | ¾ | ¾ | .. | Louisiana Oil Refining | (sh) | 1,309,069 | N.P. | .... | ..... | 18 | 7 | 12 | 3½ | 4½ | 1 |
| 1½ | ⅜ | No sales | .. | .. | .. | Maracaibo Oil | (sh) | 330,000 | N.P. | .... | ..... | 18½ | 5⅛ | 10⅜ | 1⅜ | 3¾ | ⅛ |
| 8⅞ | 3¾ | 8,600 | 4⅞ | 4⅜ | 4½ | Mid-Continent Petroleum | (sh) | 1,857,912 | N.P. | .... | 2-16-31 | 39⅞ | 22⅛ | 32 | 11 | 16¾ | 5 |
| 13 | 3½ | No sales | .. | .. | .. | National Supply of Delaware | (sh) | 390,879 | $50 | .... | 5-15-31 | 144 | 98½ | 124¾ | 60 | 70¼ | 5 |
| 11 | 5 | 7,600 | 7⅛ | 6⅝ | 6½ | Ohio Oil | (sh) | 6,648,052 | N.P. | 10cQ | 12-15-32 | 79⅞ | 64¼ | 32 | 16 | 19½ | 5⅛ |
| 14 | 6 | 100 | 12½ | 12½ | .. | Pan American P. & T. | (sh) | 1,000,000 | $5 | 20cQ | 12-15-32 | 69 | 40½ | 46½ | 42 | 35⅛ | 20 |
| 14½ | 7¼ | 100 | 12 | 12 | .. | Pan American P. & T. "B" | (sh) | 2,474,288 | $5 | 20cQ | 12-15-32 | 69¼ | 40½ | 67¼ | 30 | 36½ | 18 |
| 1¼ | ¼ | 100 | ⅝ | ⅝ | .. | Panhandle P. & R. | (sh) | 199,370 | N.P. | .... | ..... | 15¼ | 3 | 12¾ | 1⅝ | 4¼ | ⅝ |
| 8⅛ | 2 | 13,700 | 6 | 5½ | 5⅝ | Phillips Petroleum | (sh) | 4,156,908 | N.P. | .... | 1- 2-31 | 47 | 24¼ | 44⅝ | 11½ | 16⅝ | 4 |
| ⅝ | ¼ | 600 | ⅜ | ¼ | .. | Pierce Oil Corp. | | $29,622,831 | $25 | .... | ..... | 3⅜ | 1 | 2½ | ½ | 1½ | ¼ |
| 1⅝ | ½ | 2,400 | ⅞ | ⅞ | ¾ | Pierce Petroleum | (sh) | 2,500,000 | N.P. | .... | 2-16-31 | 5⅞ | ½ | 7⅛ | 1⅛ | 3⅜ | ⅛ |
| 12½ | 8½ | 2,100 | 9½ | 9 | 9 | Plymouth Oil Co. | (sh) | 1,050,000 | $5 | 75cA | ..... | .. | .. | .. | .. | .. | .. |
| 9½ | 3½ | No sales | .. | .. | .. | Prairie Oil & Gas | | $61,035,800 | $25 | .... | 3-31-31 | 65⅝ | 40½ | 54 | 11¼ | 20⅜ | 4⅛ |
| 12¼ | 5½ | 100 | 8 | 8 | 7¾ | Prairie Pipe Line | | $101,250,000 | $25 | .... | 6-30-31 | 65 | 45 | 60 | 16⅝ | 26½ | 5⅞ |
| 1⅝ | ⅛ | 600 | ⅜ | ⅜ | .. | Producers & Refiners | | $37,438,950 | $50 | .... | 9-15-23 | 25⅞ | 4 | 11⅞ | 1 | 6 | 1 |
| 9¾ | 1 | 10 | 4 | 4 | .. | Producers & Refiners pfd. | | $2,845,350 | $50 | .... | 5- 4-25 | 46¾ | 25½ | 40 | 11½ | 16 | 8 |
| 6½ | 2⅞ | 3,000 | 3⅞ | 3½ | 3½ | Pure Oil | | $75,959,250 | $25 | .... | 9- 1-30 | 30¾ | 20 | 27¼ | 7⅝ | 11⅞ | 3¼ |
| 1⅜ | ¼ | 1,000 | ½ | ½ | .. | Richfield Oil (new) | | $52,410,875 | N.P. | .... | ..... | 49⅝ | 20 | 9⅜ | 4½ | 6⅝ | ⅝ |
| 23¾ | 12¼ | 900 | 21¼ | 20½ | 19¾ | Royal Dutch N. Y. | (sh) | 611,303 | .... | 80½cf† | 8- 5-32 | 64 | 43⅛ | 56½ | 36⅞ | 42⅝ | 13 |
| 20⅜ | 6⅝ | 6,300 | 19¾ | 18¼ | 17⅞ | Seaboard Oil of Delaware | (sh) | 1,244,383 | $4 | 10cQ | 9-15-32 | 59⅜ | 8¼ | 37 | 9¾ | 20¾ | 5½ |
| 16⅜ | 8 | 110 | 16 | 15¼ | .. | Shell Transport & Trading Co. | | £23,985,000 | £1 | 53cf† | 7-22-32 | 51½ | 40⅝ | 48⅝ | 26 | 34 | 5 |
| 8⅝ | 2½ | 5,600 | 5⅝ | 5 | 5⅛ | Shell Union Oil | (sh) | 13,066,497 | N.P. | .... | 6-30-30 | 31⅜ | 19 | 25½ | 5¼ | 10¼ | 2½ |
| 65¼ | 18 | 800 | 44½ | 43 | 40 | Shell Union Oil pfd. | (sh) | 400,000 | $100 | .... | 7- 1-31 | 106¼ | 93 | 106¼ | 55 | 78 | 15 |
| 7½ | 3¼ | 600 | 6¼ | 5¾ | .. | Simms Petroleum | (sh) | 600,000 | $20 | 25cQ | 1-16-32 | 40⅛ | 15 | 37 | 5⅝ | 11 | 3⅛ |
| 5¾ | 2½ | 300 | 3⅝ | 3½ | 3½ | Skelly Oil | | $27,441,250 | $25 | .... | 12-15-30 | 40½ | 28 | 12 | 10⅛ | 12⅞ | 2 |
| 33½ | 12 | 300 | 25½ | 25 | 24 | Skelly Oil pfd. | (sh) | 119,800 | $100 | .... | 5- 1-31 | .. | .. | 99¾ | 42 | 62 | 10 |
| 12¼ | 5¼ | 23,500 | 7⅞ | 7¼ | 7¼ | Socony-Vacuum | | $793,613,588 | $25 | 10cQ | 12-15-32 | .. | .. | 106⅝ | 98 | 106 | 87⅛ |
| 100½ | 81 | 2,400 | 100¼ | 99⅞ | 100 | Standard Oil Export pfd. | (sh) | 764,885 | $100 | $2.50SA. | 6-30-32 | .. | .. | .. | .. | 21 | 8⅝ |
| 31⅞ | 15⅛ | 7,400 | 25⅞ | 24¾ | 24½ | Standard Oil of California | (sh) | 13,102,900 | N.P. | 50cQ | 12-15-32 | 81⅞ | 51½ | 75 | 42½ | 51⅝ | 23½ |
| 16½ | 7 | 3,200 | 16¼ | 15½ | 16½ | Standard Oil of Kansas | | $8,000,000 | $25 | .... | 3-16-31 | 33¾ | 18 | 49 | 14⅜ | 19 | 7⅝ |
| 37⅜ | 19⅞ | 19,600 | 31⅜ | 30⅛ | 30¼ | Standard Oil of New Jersey | | $637,961,700 | $25 | 25cQ | 12-15-32 | 83 | 49 | 84⅞ | 32½ | 52½ | 26 |
| 39¾ | 24¾ | 200 | 36⅛ | 36 | .. | Sun Oil | (sh) | 1,416,869 | N.P. | 25cQ | 12-15-32 | 68⅜ | 55 | 70 | 39 | 45¼ | 26⅝ |
| 2 | ¼ | 14,500 | 1½ | 1 | 1 | Superior Oil Corp. | (sh) | 766,979 | N.P. | .... | 12-20-30 | 24 | 5¼ | 9⅜ | ⅝ | 1⅜ | ¼ |
| 18¼ | 9¼ | 8,300 | 14⅛ | 13¼ | 13⅛ | The Texas Corporation | | $246,204,900 | $25 | 25cQ | 1- 1-33 | 71⅞ | 50 | 60½ | 28¼ | 36¼ | 9⅞ |
| 4 | 1½ | 200 | 1¾ | 1⅝ | .. | Texas Pacific Coal & Oil Co. | | $9,304,890 | $10 | .... | 12-31-29 | 23⅞ | 9½ | 14½ | 4 | 6½ | 1⅜ |
| 10 | 5 | No sales | .. | .. | .. | Tide Water Oil | (sh) | 2,191,823 | N.P. | 25cQ | 12-31-32 | 40 | 14 | 31 | 13 | 18 | 9⅞ |
| 62 | 30 | 300 | 49 | 46¼ | .. | Tide Water Oil pfd. | (sh) | 199,446 | N.P. | $1.25Q | 2-15-33 | 97½ | 85⅛ | 94⅞ | 71 | 83 | 30 |
| 5⅝ | 2 | 4,800 | 3½ | 3⅛ | 3¼ | Tide Water Associated | (sh) | 5,560,424 | N.P. | .... | 2-16-31 | 23½ | 10 | 17¾ | 5⅞ | 9 | 2⅛ |
| 60 | 20 | 700 | 44⅛ | 43 | 43 | Tide Water Associated pfd. | | $73,284,500 | .... | $1.50Q | 1- 1-33 | 90⅞ | 74⅛ | 89⅝ | 55 | 68 | 20½ |
| 15⅜ | 8 | 1,400 | 11½ | 10⅞ | 11 | Union Oil of California | | $109,651,750 | $25 | 25cQ | 11-10-32 | 57 | 42⅛ | 50 | 10⅛ | 26⅝ | 11 |
| 19¼ | 11¾ | 200 | 12 | 11⅝ | .. | Union Tank Car | (sh) | 1,254,048 | N.P. | 35cQ | 12- 1-32 | 163¾ | 121⅞ | 38½ | 23 | 25¼ | 16 |
| 2¼ | ½ | 2,800 | 1½ | 1⅛ | 1⅛ | Warner-Quinlan | (sh) | 632,948 | N.P. | .... | 7- 1-30 | 42⅞ | 15 | 27 | 4¼ | 7⅝ | ⅜ |
| 8¼ | 2⅜ | 4,300 | 3 | 2⅝ | .. | Wilcox Oil & Gas | (sh) | 428,967 | $5 | ... | 5-10-28 | 29¾ | 12⅞ | 21 | 6½ | 9⅜ | 2⅜ |

*Ex-dividend. †Interim dividend for 1931. ‡Plus extra dividend of 25 cents. §Payable in 5% convertible preferred stock. A—Paid this year; no regular rate.
In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

# PERSONAL PARAGRAPHS

J. S. Dewar, Bartlesville, Okla., has returned from a business and pleasure trip to California.

• • •

Andrew Milek, geologist, Mexican Sinclair Petroleum Corporation, Tampico, Mexico, was in Tulsa on a business trip.

• • •

Joe Cook, of Denver, Colo., one of the organizers of the Carbon Oil & Gas Company, spent a week-end in Casper, Wyo., recently.

• • •

Winston T. Henry, Putnam Oil Company, Tulsa, has moved to Houston, Tex., where he has opened offices in the Second National Bank Building.

• • •

C. E. Miller, president of Berry Asphalt Company, Chicago, and also of James B. Berry Sons Company, Oil City, Pa., has been in Houston, Tex., on business.

• • •

G. Sidney Smith, Margay Oil Company, Tulsa, has recently moved to Houston, Tex., to open offices for his company in the First National Bank Building.

• • •

B. B. Blair, independent operator, Tulsa, has been staying at Houston, Tex., in connection with the wildcat leasing and development play now going on in the Gulf Coast.

• • •

C. R. Gerth, manager of the Hamburg Amerikanische Mineralol G.m.b.H., distributors for Tide Water Oil Company in Germany, was a recent visitor in New York, where he spent a vacation with his family.

• • •

C. E. Calder, president of the American & Foreign Power Corporation, and vice president of the Electric Bond & Share Corporation, New York, has been making a visit to his old home in Dallas, Tex., during the past week.

• • •

H. B. Smith, vice president of the Sinclair Prairie Oil Company, Tulsa; W. G. Gish, in charge of the Fort Worth, Tex., offices, and H. Smith Clark, district geologist for the company, Fort Worth, are making a tour of all Texas fields.

• • •

J. A. Horn, with The Texas Company, has been transferred from McCamey to Pampa, Tex., to take over management of the old Champlin Refining Company plant, recently bought by his company. He will be in charge of the Panhandle division for The Texas Company.

• • •

Ralph H. Kinsloe, vice president of the Magnolia Petroleum Company, Dallas, Tex., has accepted the chairmanship of the A Major Division of the chamber of commerce, now being organized. L. B. Denning, president of the Lone Star Gas Company, is chairman of the drive.

• • •

The Fort Worth Geological Society had E. B. Kimball as its speaker at its weekly luncheon in Fort Worth, on January 16. Mr. Kimball, well known mining engineer and oil operator, spoke on "Experience of a Mining Engineer in the Federated Malay States." He was a classmate of President Hoover at Stanford University.

• • •

Delmar L. Powers, chief geologist for the Hudson's Bay Oil & Gas Company, left Calgary recently for Denver, Colo., where he will be on the staff of the Continental Oil Company. Mr. Powers has been for some years on the staff of the Continental's Canadian subsidiary, and is president of the Alberta Society of Petroleum Geologists.

• • •

J. H. Connors, vice president and general manager of the B. F. Goodrich Company, mechanical goods division, has been re-elected by acclamation to serve a second term as chairman of the mechanical goods division of the Rubber Manufacturers Association. Mr. Connors has been identified with Goodrich mechanical goods activities for more than 20 years.

R. A. Josey, Houston, Tex., independent operator and capitalist, has been visiting in New York City on business.

• • •

Rufus J. Pilcher, of the Petroleum Rectifying Company of California, is passing out cigars upon the arrival of a young son.

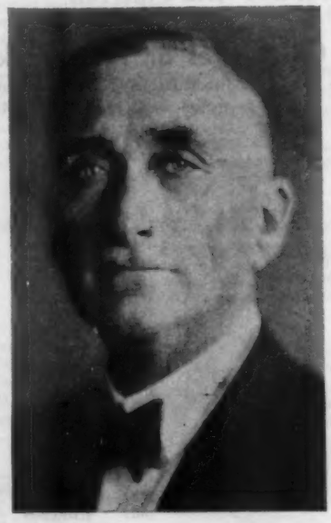
• • •

G. T. Stanford, general counsel for Sinclair Refining Company, New York City, visited briefly in Cheyenne, Wyo., while on a western trip.

• • •

Richard Airey, president of the Asiatic Petroleum Corporation, has been elected vice president of the British Empire Chamber of Commerce in the United States of America, Inc., for 1933.

## Men of the Industry



### J. R. CRAWFORD

J. R. Crawford, who succeeds F. Ray McGrew, president of the Standard Pipe Line Company, as president of the North Louisiana-Arkansas division of the Mid-Continent Oil and Gas Association, is one of the pioneers of North Louisiana-Arkansas oil country, having put in a quarter century as driller and independent producer.

A native of Mississippi—he was born in Chickasaw County, October 10, 1873—Mr. Crawford got his first oil field experience in the Spindletop and other Texas and Louisiana Coastal fields to which he emigrated at the age of 18, after completing his education as far as the little red school house (really it was a log affair) could take him and tiring of the monotony of farm life. It could not be said that he tired of long hours and hard work, because he has continued to have them all his life and at 60 he shows no signs of letting up.

Mr. Crawford left Spindletop in 1908 for the new Caddo Field that was just then getting into its full stride and has been there ever since. His first activities in the new location were as a driller for the Caddo Gas & Oil Company, in which W. C. Woolf and B. G. Dawes were associated. About a year later he went to work for the Gulf Refining Company, remaining with that organization until he formed a partnership with O. L. Hickman and entered the contracting field for himself. He has been in it ever since, and though having interests in various other oil fields he has made Shreveport, La., his home and headquarters.

H. C. Tyrrell, of the Pulaski Oil Company, Tulsa, is spending some time at Houston, Tex.

• • •

Prof. Eugene A. Stephenson, Missouri School of Mines, Rolla, Mo., was in Tulsa on professional business.

• • •

L. P. Darnell, sales manager for the Cincinnati Rubber Manufacturing Company, Cincinnati, Ohio, spent some time in Tulsa last week.

• • •

Charles S. Hill, of Denver, Colo., who is interested in the production in LaBarge Field, southwestern Wyoming, was in Casper, Wyo., recently.

• • •

Ed Zoble, chief clerk at Amarillo, Tex., for The Texas Company, has been transferred to Casper, Wyo., to succeed Thomas U. Troth who has been sent to Amarillo.

• • •

Phil K. French, of Fort Worth, Tex., and Phil Loffland, Tulsa, independent operators, have opened joint offices at Houston, Tex., in the Second National Bank Building.

• • •

C. M. Nelson has resigned as assistant manager of insurance and personnel of the Union Oil Company in order to accept a position in the scenario department of the Metro-Golden-Mayer Studios.

• • •

H. M. Fritts, geologist for the Shell Petroleum Corporation, and Miss Frances Sullivan, of Big Spring, Tex., were married recently and are now at home in San Angelo, Tex., where Mr. Fritts is stationed.

• • •

Homer A. Noble, formerly connected with the geological force of Shell Petroleum Corporation, Houston, Tex., has opened offices in the Sterling Building at Houston where he will do consulting geological work.

• • •

Former Governor B. B. Brooks, son and daughter-in-law, Mr. and Mrs. S. N. Brooks, of Wyoming, are en route by motor to the Pacific Coast. Mr. Brooks is president of the Consolidated Royalty Oil Company, and of the Rocky Mountain Oil and Gas Association.

• • •

H. H. Perrigo, engineer in charge of the Billings, Mont., office of the U. S. Geological Survey, was in Casper, Wyo., on business. He was accompanied on the return trip by H. J. Duncan, supervisor, and W. H. Strang, deputy supervisor, of the U. S. Geological Survey.

• • •

Maj. Harry Johnson, with the Gulf Production Company, Midland, Tex., has been elected commander of the American Legion Post in that city. Major Johnson, in charge of Texas National Guardsmen in the East Texas Field in 1931 and 1932, dug up many "by passes" on wells in the Gladewater district.

• • •

R. M. Heskett, of Minneapolis, Minn., with the Minneapolis Power Company, was in Casper, Wyo., on business with the mineral leasing division of the U. S. Geological Survey. The Minnesota Power Company furnishes natural gas to a number of Montana, North Dakota and South Dakota towns from the Baker-Glendive Field in southeastern Montana.

• • •

Col. Oscar H. Fogg, vice president of the Consolidated Gas Company, has been elected a vice president of the New York Edison Company. He is a director of the following nine companies of the Consolidated Gas group: Westchester Lighting, Bronx Gas & Electric, Central Union Gas, Northern Union Gas, National Coal & Coke, East River Gas, Standard Gas Light, United Electric Light & Power and New York & Queens Electric Light & Power. He served a year as vice president of the American Gas Association in 1928 and two years as president, beginning in 1927.

# None are so blind as those . . . who will not see

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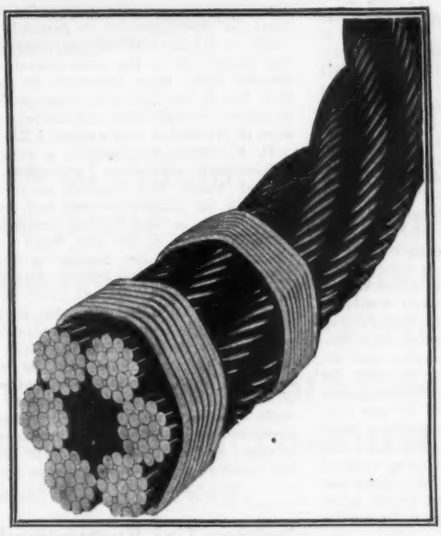

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# NATURAL GAS DEVELOPMENTS

## Midwestern Oil & Gas Co. Bought by Gas Utilities

Gas Utilities Co. of New York, which recently took over the American Natural Gas Corp. when the latter went into receivership, has been announced as purchaser of the Midwestern Oil & Gas Co. of Okmulgee, Okla., of which Earl G. Colton and R. P. Lester were principals.

The Gas Utilities Co. will assume operating management at once.

The Midwestern properties include several thousand acres of leases on well-known structures in Pittsburg, Coal, Latimer, Haskell, Muskogee and McIntosh Counties. There are a number of producing gas wells on the Midwestern properties in the Quinton, Red Oak, Warner and adjacent fields.

Organized in September, 1929, by a group of oil and gas men of Okmulgee, the Midwestern took over the properties of Colton and Lester, and brought in numerous gas wells on leases included in the sale.

## May Carry California Gas to Washington and Oregon

SAN FRANCISCO, Calif., Jan. 23.—At a hearing before the State Railroad Commission here on the application of the Pacific Gas & Electric Co. for approval of its supplemental contract with Standard Oil, by which it gets the right to all Standard gas not already otherwise contracted, direct acknowledgement was made of the fact that there is a definite possibility of California natural gas being piped to Oregon and Washington. Allen Chickering, counsel for the Pacific Gas & Electric Co., made this acknowledgment when explaining the need of his company for increased and assured supplies of natural gas to meet prospective competition.

It was not stated by what interests the proposed line to the Northwest would be built. If this line is built there is the likelihood of new developments in northern California, such as chemical and nitrate works, along the line of what the Shell Chemical Co. is doing. These plants would be heavy consumers of gas and would come in direct competition with present consumers, hence the need for greater supplies. Mr. Chickering pointed out that because of the diminishing gas supply in the Los Angeles Basin more Kettleman Hills gas is likely to be needed in the South.

### GAS CONVENTION DATE CHOSEN

The Southern Gas Association decided at its executive committee meeting to hold its next annual convention on May 2, 3 and 4, 1933, in Washington, D. C., and the Shoreham Hotel was designated as headquarters. It is stated that unusually interesting subjects and speakers have been selected for this convention, which will be the twenty-fifth anniversary of the founding of the association. In connection with it will be held the American Gas Association's southern regional gas sales conference.

### NEW BRISTOW RATES

The Oklahoma Utilities Co. has announced a new scale of domestic gas rates for Bristow, Okla., the new figure being $1 for the first thousand feet, 33 cents for each of the next 74,000, and 18 cents for each thousand thereafter. The old rate was 50 cents a thousand flat. The city council has approved the new scale and an application pending before the Corporation Commission for lower rates probably will be withdrawn, it was announced.

## Hearings Concluded on Conservation of Natural Gas in the Turner Valley

CHATHAM, Ontario, Jan. 21.—The Turner Valley Gas Conservation Board last week completed its public hearing preliminary to the presentation to the Alberta legislature of a permanent program for operation of the Turner Valley Field.

Stanley Slipper, chief geologist for the Canadian Western Natural Gas, Light, Heat & Power Co. testified that with decline in gas pressures, naphtha recovery decreased, and that consequently gas conservation would be of direct benefit to naphtha producers. Much natural gasoline, burned in waste gas flares after extraction of the naphtha, could have been saved if a gasoline absorption plant had been in operation. He estimated that in 1940 the Turner Valley gas reserve would be 111,000,000,000 feet with 194 pounds average pressure, insufficient to deliver the gas to Calgary; this estimate being based on the present permitted flow of 200,000,000 feet per day. This did not take into consideration the grave danger of water intrusion. He placed the total gas production up to November 27, 1932, at 477,229,000,000 feet, with naphtha production in the same period of 5,087,007 bbls. Rock pressures in Royalite's No. 4, the first deep lime producer, he placed at 2,050 feet, and average pressure in November was around 1,220 feet.

B. F. Hake, representing a group of independent producers, estimated the Turner Valley gas reserves as of July 15, 1932, at 732,000,000,000 feet, taking 400 pounds as the lowest pressure for commercial use of the gas. With atmospheric pressure, the reserve would be 1,043,000,000,000 feet. He estimated the average pressure in July at 1,303 pounds as against 1,455 pounds the previous August. Traces of water were probably from rotary drilling; and the field, certainly cut off in the east flank by faults, might be completely isolated from water intrusion. He suggested operating the wells at a certain percentage of closed-in pressures in preference to the gas quota system; and outlined a program including removal of all restrictions on gas export and equitable participation of all producers in gas sales.

Stanley Davies, representing the Mercury, East Crest, Miracle and Mill City companies, expressed the opinion that within two years 58 out of 88 wells would cease to produce naphtha and become purely gas producers. Depletion of naphtha in certain parts of the field was too far advanced for unit operation. He suggested proration and a common purchaser law which would enable other companies to participate in gas sales when the Royalite Oil Co.'s supply became exhausted.

J. McCain Brewster, consulting engineer for the board, outlined the board's plan of valuation. Providing for a daily maximum flow of 200,000,000 feet, the board's valuation report, based on acreage, 24 hours closed-in pressure and naphtha production during 10-day tests, gave valuations ranging from 25.765 per cent allotted the Royalite Oil Co. producers to .021 per cent allotted Illinois-Alberta Oils, Ltd. The summary gave independent companies a valuation of 23.792 per cent; nonproducing independents, 8.727 per cent; Imperial subsidiaries, 48.107 per cent and Imperial contract companies 19.388 per cent. The gas quotas allowed were: Independent producing companies, 47,573,000 feet a day; nonproducing independents, 17,434,000 feet; Imperial subsidiaries, 96,212,000 feet and Imperial contract companies, 38,773,000 feet; a total of 199,992,000 feet a day.

Various aspects of the question of compensation were discussed by representatives of the various producing interests. At the conclusion of the hearing it was intimated that the board would present its report to the Alberta legislature which will meet on February 9.

In the meantime, Spooner Oils, Ltd., which last year challenged the validity of the legislation under which the Gas Conservation Board was appointed, is taking steps to carry its case of the Supreme Court of Canada. Both the trial judge and the appellate division of the Alberta Supreme Court last year upheld the validity of the conservation measures.

## Sulphur Gas Encountered in Ontario, Canada, Well

CHATHAM, Ontario, Jan. 21.—In the Ontario fields, Vacuum Gas & Oil Co.'s No. 4, McLaren farm, North Talbot Road, in Orford Township, Kent County, is being finished as a small gasser with an estimated shot production of around 150,000 feet. A noteworthy feature is that the production is a sulphur gas similar to that encountered in the prolific Tilbury Field farther west.

The strike, while small, indicates the probability of an important new gas area. While gas fields have been discovered along the north shore of Lake Erie at various points between Point Abino in Welland County and the old Essex gas field, there is a large strip of territory extending from the Richmond Field in Elgin County to the D'Clute and Tilbury Fields in Kent, which is practically untested. Vacuum's No. 4 is located about midway between these fields. It was undertaken after the drilling of a series of shallow tests had defined a structure. Production of Vacuum's No. 4 has been shut in, and will be used for drilling No. 5, which will be started in the near future.

## Gas Utilities Co. Extends Time for Issuing Stock

More than two-thirds of the $10,683,500 outstanding 6½ per cent debentures of the American Natural Gas Corp. have been deposited in exchange for capital stock of the Gas Utilities Co., under the reorganization plan sponsored by the debenture holders' protective committee, headed by Ferdinand Eberstadt.

At the request of the committee, Gas Utilities Co. has agreed to extend to March 13 the period within which it would issue its capital stock against the surrender of debentures, on the basis of 10 shares of capital stock for each $1,000 face amount of debentures surrendered. The plan is fully operative, and the stock of the new company has been or is being issued against all debentures deposited to date.

### FRANCHISE IN TACOMA ASKED

TACOMA, Wash., Jan. 23.—A franchise request for serving Tacoma with natural gas is pending before the city council. The request is from Walter Metzenbaum of Seattle, an attorney for several unnamed associates.

## More Drilling for Gas in St. Lawrence Valley

CHATHAM, Ontario, Jan. 21.—Drilling in the St. Lawrence Valley of Quebec has been quite active for nearly two years, following extensive leasing in 1930, based on the gas showings early in the century when gas was for some time supplied to the city of Three Rivers. It was felt that the failure of the early development had been due largely to inefficient drilling and production methods, and that under modern conditions better results could be secured. The recent drilling was encouraged by the fact that in fairly close proximity to the potential fields was a large urban population, the gas areas lying between Montreal and Quebec. Leasing and drilling covered two main areas, one south and the other north of the St. Lawrence River. Some 19 companies or syndicates were listed as operators,

South of the St. Lawrence, a number of deep drilling tests were put down. One of the major companies interested was the Hope Engineering Co., which operated through a subsidiary, the Richelieu Gas Co. Richelieu's No. 1 in Lot 549, Range 3, parish of St. Denis, county of St. Hyacinthe, started early in 1931 and was ultimately abandoned at 2,500 feet with the tools in the hole, as a result of caving. The rig was skidded 50 feet south and Richelieu's No. 2 started, being carried ultimately to 4,107 feet. The log of this well is given as follows:

| | |
|---|---|
| Surface deposits | 0 to 145 |
| Queenston shale | 145 to 952 |
| Igneous rock | 952 to 960 |
| Richmond and Lorraine shale | 960 to 2,105 |
| Igneous rock | 2,105 to 2,153 |
| Lorraine shale | 2,153 to 3,360 |
| Utica shale | 3,360 to 4,090 |
| Presumably Trenton | 4,090 to 4,107 |

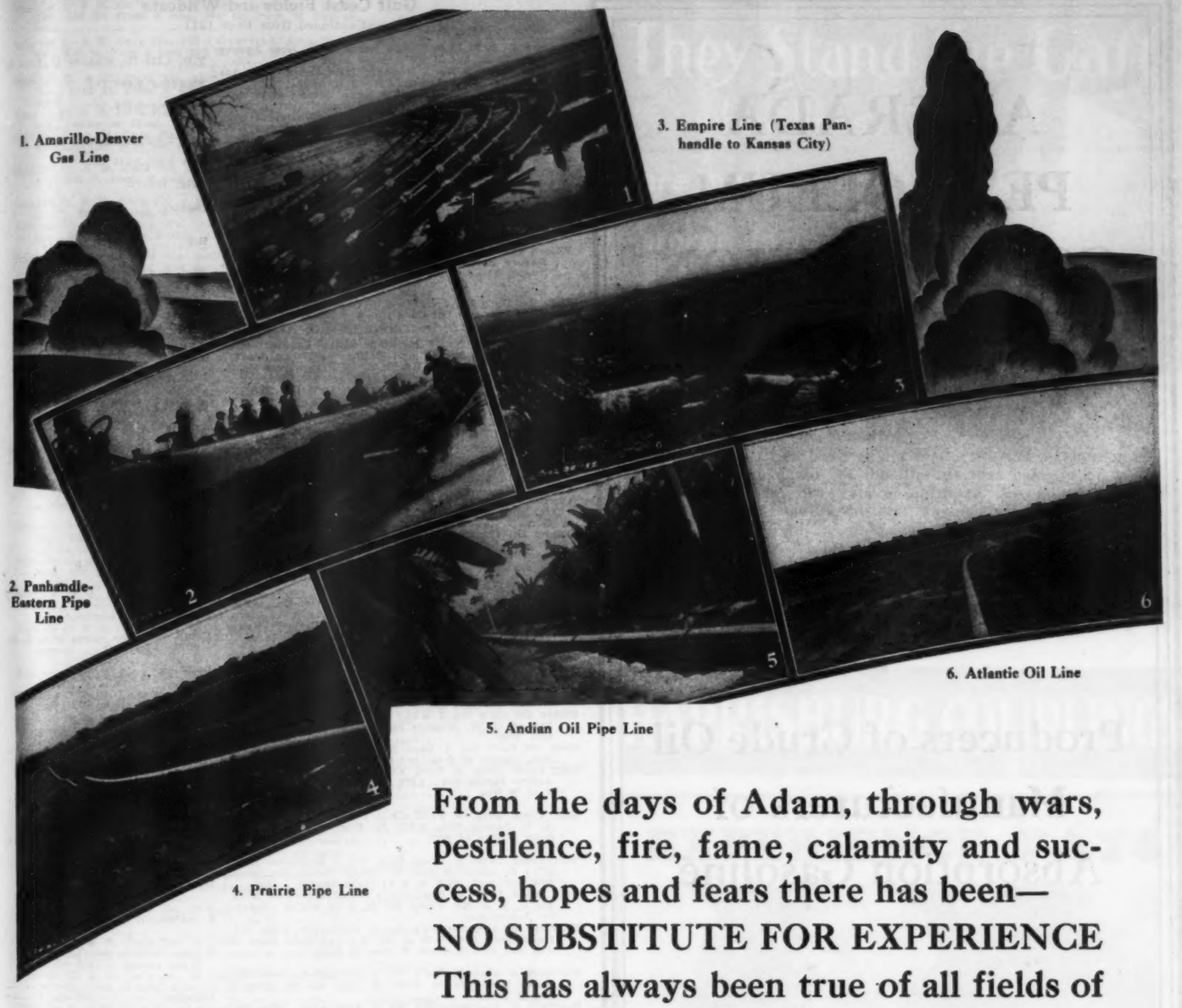
The drilling finished in the top of the Trenton. A first shot was unsuccessful, but a second went off satisfactorily, failing, however, to develop any appreciable quantity of gas. With completion of this test the Richelieu Gas Co. discontinued operations.

In Yamaska County, Canadian Seaboard Oil & Gas Co. started a test in St. Gerard Parish, which finished dry at 6,160 feet.

The third deep test south of the St. Lawrence was drilled by South Shore Oil Lands, Ltd., near Ste. Perpetue, county of Nicolet. Owing to drilling difficulties, South Shore's No. 1 was abandoned at 3,200 feet and No. 2 was started near the river, a short distance north. This test finished dry at 4,400 feet.

In addition to these deep drilling operations, all south of the river, there has been some shallow drilling, most of it north of the river. The one test south of the river was Cote Gas & Oil Co.'s No. 1 at Ste. Eulalie, in Nicolet County. This was drilled to 700 feet and left standing.

North of the St. Lawrence River, drilling was carried on in Berthier and L'Assomption Counties. In the south end of Berthier County, close to the river, Lanoraie Oil & Gas Syndicate struck a fair gas flow after drilling to 210 feet. A test in the same vicinity by Trinidad Mines, Gas & Oil, Ltd., was carried to 185 feet with similar results reported. St. Paul Oil & Gas Co. drilled a test to 130 feet at St. Valteur, also in Berthier County. The same company drilled a second well at Cabane Ronde, in L'Assomption County, going to 300 feet. All these wells apparently encountered fair flows of shallow gas; and the Lanoraie Syndicate has been considering the laying of a pipe line to supply the town of Joliette, if additional drilling should indicate a satisfactory production from the shallow horizon.


1. Amarillo-Denver Gas Line
3. Empire Line (Texas Panhandle to Kansas City)
2. Panhandle-Eastern Pipe Line
6. Atlantic Oil Line
5. Andian Oil Pipe Line
4. Prairie Pipe Line

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Tulsa, - Oklahoma

## Gulf Coast Fields and Wildcats

(Continued from Page 121)

Empire G. & F. Co.'s No. 84 Barngrover, Jesse Devore Sur., 75 ft. out of SW cor. of lease ..... T.D. 5,219 ft; plugged to 4,761 ft.
Hannah Oil Co.'s No. 1 Hannah, Jesse Devore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... Standing 3,665 ft.
Lynd & Rowe's No. 1 Noble & Lynd, Jesse Devore Sur., 137 ft. out of SE cor. of 5-ac. tract ..... Standing 3,564 ft.
Porter & Baggett's No. 1 Baggett, Jesse Devore Sur., 50 ft. from W line, 50 ft. from S line of 171-ac. tract ..... S.D. 2,071 ft.
Republic Prod. Co.'s No. 148 Dolbear, Jesse Devore Sur., 250 ft. W of No. 139 ..... Salt 2,454-2,540 ft.
Republic Prod. Co.'s No. 149 Dolbear, Jesse Devore Sur., 250 ft. W of No. 8 ..... Drlg. 320 ft.
D. L. Thibodeaux' No. 2 Taylor, Jesse Devore Sur., 100 ft. N of No. 1 ..... Derrick.
Unique Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse Devore Sur., 30 ft. from N line and midway E and W of ½-ac. tract ..... Rig.
Wilson Oil Co.'s (Aberoil Oil Co.) No. 1 Barrow, Jesse Devore Sur., 64 ft. from N line, 700 ft. from E line of 10-ac. tract ..... Shale 5,212 ft.

### LIBERTY—LIBERTY COUNTY

J. E. Teddlie's No. 1 Baldwin, Wm. White Sur., 100 ft. W of Navarro Oil Co.'s No. 4 ..... Derrick

### CONROE—MONTGOMERY COUNTY

Alpha Oil Co.'s No. 2 Keystone Mills, Lemuel Smith Sur., 456 ft. from S and E lines of 200-ac. tract ... Derrick.
Alpha Oil Co.'s No. 1-A Krohn, S. H. Bryan Sur., 466 ft. from S line in center E and W of 100-ac. tract ... Drlg. shale 4,395 ft.
Alpha Oil Co.'s No. 1-C South Tex. Dev. Co., T.&N.O. Sur. No. 13, 450 ft. from N line, 350 ft. from W line of 40 acres ..... Shale 1,250 ft; cmtd. 10-in. csg.
Amerada Pet. Corp.'s No. 1 South Tex. Dev. Co., C. A. West Sur., 350 ft. from N line, 466 ft. from W line of lease ..... Comp. 123 bls. per hr.; ¾-in. choke; 1,025 lbs.; 5,125 ft.
Amerada Pet. Corp.'s No. 2 South Tex. Dev. Co., 466 ft. from S line, 410 ft. from W line of C. A. West Sur. ..... Drlg. shale 2,815 ft.
Amerada Pet. Corp.'s No. 3 South Tex. Dev. Co., 909 ft. from W line, 1,005 ft. from S line of C. A. West Sur. ..... Derrick.
Bishop Oil Corp.'s No. 1 Rhoden, 466 ft. from E line in center N and S of 25.8-ac. tract ..... Derrick.
Bishop Oil Corp.'s No. 1 Rhoden, 466 ft. from W line in center N and S of 25.8-ac. tract ..... Location.
Bishop Oil Co.'s No. 1 Smith & Ratcliff, W. F. Rhodes Sur., 466 ft. out of SE cor. of lease ..... Rig.
H. M. Crighton's No. 1-A South Tex. Dev. Co., center of 16-ac. lease in T.&N.O. Sur. No. 5 ..... Location.
Faryin Oil Co.'s No. 1 W. F. Stewart, Ransom House Sur., 466 ft. from N and W lines of lease ..... Comp. 70 bbls. per hr.; ½-in. choke; 5,125 ft.
Faryin Oil Co.'s No. 1 R. Thompson, center of 10-ac. lease (Lots 55 and 53), C. A. West Sur. ..... Location.
Feltex Oil Co.'s No. 1 Keystone Mills, Lemuel Smith Sur., 466 ft. from E line of 60-ac. lease in center N and S ..... Drlg. sticky shale 4,345 ft.
Feltex Oil Co.'s No. 1 Kirby Bertrand, 466 ft. from N line of G. W. Wagers Sur. in center of lease east and west ..... Drlg. gumbo 1,604 ft.
Gem Oil Co.'s No. 1 Exra Moorehead, John McHorse Sur., center of 6-ac. tract ..... Drlg. broken sand 2,615 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 2 Keystone Mills, Ashby James Sur., 1,336 ft E of NW cor., 467 ft. S of N line ..... Comp. 92 bbls. per hr.; 675 lbs.; ½-in. choke; 5,153 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 3 Keystone Mills, A. S. James Sur., 2,333 ft. from E line, 466 ft. from N line of Sur. ..... Sand and shale showing oil 5,064 ft; cmtd. 7-in. csg. 5,003 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 4 Keystone Mills, 489.3 ft. along N line of Ashby James Sur. from NW cor. and 466.6 ft. S at right angles ..... Derrick.
Gulf Coast Drlg. & Prod. Co.'s No. 5 Keystone Mills, 934 ft. E of No. 3 and 467 ft. S of N line of Ashby James Sur. ..... Location.
Harrison & Abercrombie's No. 2 Alexander, John McHorse Sur., 964 ft. E of No. 1 or 1,535 ft. from W line and 891 ft. from N line of tract ..... Comp. 129 bbls. per hr.; 750 lbs.; ½-in. choke.
Harrison & Abercrombie's No. 4 Alexander, John McHorse Sur., 356 ft. from E line, 425 ft. from S line of lease ..... Location.
Harrison & Abercrombie's No. 5 Alexander, John McHorse Sur., 466 ft. E of E line of Ransom House Sur., and 425 ft. from S line of lease ..... Drlg. sticky shale 4,225 ft.
Harrison & Abercrombie's No. 6 Alexander, John McHorse Sur., 466 ft. from W line, 300 ft. from S line of lease ..... Location.
Harrison & Abercrombie's No. 1 Mrs. Lola McShan, T. M. Wiggins Sur., 466 ft. from N line in center E and W of lease ..... Drlg. shale and sand 3,135 ft.
Harrison & Abercrombie's No. 1 Arthur Wiggins, 403 ft. W of E line and 207 ft. N of S line of T. M. Wiggins Sur. ..... Derrick.
Hooper-Rutherford Oil Co.'s No. 5 Hooper, L&G.N. Sur., Abst. 649, 415 ft. from S line, 570 ft. from W line of lease ..... Derrick.
Hooper-Rutherford Oil Co.'s No. 4 Hooper, L&G.N. Sur. No. 649, center of tract E and W and due E offset Houston-Tidal's No. 1 Hooper ..... Derrick.
Houston Oil Co. and Tidal Oil Co.'s No. 3 Cartwright, John Davis Sur., 932 ft. W of No. 2 and 467 ft. from S line ..... Flowed 207 bbls. in 18 hrs.; 525 lbs.; 3/16-in. choke.
Houston Oil Co.-Tide Water Oil Co.'s No. 4 Cartwright, John Davis Sur., 332 ft. from E line, 799 ft. from N line of lease ..... Location.
Houston Oil Co.-Tide Water Oil Co.'s No. 5 Cartwright, John Davis Sur., 933 ft. E of No. 1 and 466 ft. from S line of lease ..... Drlg. sand and boulders 273 ft.
Houston Oil Co.-Tide Water Oil Co.'s No. 6 Cartwright, John Davis Sur., 932 ft. E of No. 5 and 466 ft. from S line of lease ..... Location.
Houston Oil Co.-Tide Water Oil Co.'s No. 3 Joe Hamman, C. B. Stewart Sur., 467 ft. from E line, 1,511 ft. from S line of lease ..... Drlg. sticky shale 2,873 ft.
Houston Oil Co.-Tide Water Oil Co.'s No. 4 Hamman, C. B. Stewart Sur., 467 ft. from E line and 1,076 ft. S of No. 2 ..... Sticky shale 1,400 ft; cmtd. csg.
Houston Oil Co.-Tide Water Oil Co.'s No. 5 Hamman, C. B. Stewart Sur., 466 ft. from S and E line of lease ..... Location.
Houston Oil Co.-Tide Water Oil Co.'s No. 2 W. N. Hooper, Jr., L&G.N. Sur. No. 11, 400 ft. from S line of lease in center of tract E and W ..... Drlg. sticky shale 3,805 ft.
Houston Oil Co.-Tide Water Oil Co.'s No. 3 W. N. Hooper, Jr., L&G.N. Sur. No. 11, 667 ft. S of No. 1 in center of tract E and W ..... Location.
Humble O. & R. Co.'s No. 9-A Cartwright, J. Davis Sur., 933 ft. NE of No. 6 ..... Location.
Humble O. & R. Co.'s No. 9-A Cartwright, J. Davis Sur., 1,485 ft. from E line, 466 ft. from S line of lease ..... Sand showing oil 5,170 ft.

| | |
|---|---|
| Humble O. & R. Co.'s No. 1-C Cartwright, John Davis Sur., 550 ft. from S line, 350 ft. from W line of lease | Drlg. sand and shale 5,075 ft. |
| Humble O. & R. Co.'s No. 2-C Cartwright, John Davis Sur., 550 ft. from S line, 300 ft. from E line of "C" lease | Location. |
| Humble O. & R. Co.'s No. 3-C Cartwright, J. Davis Sur., 1,375 ft. from E line, 466 ft. from S line of lease | Location. |
| Humble O. & R. Co.'s No. 1-D Cartwright, John Davis Sur., center of 20-ac. "D" lease | Drlg. shale and lime 5,002 ft. |
| Humble O. & R. Co.'s No. 4 Dobbins, Ransom House Sur., 1,064 ft. E of No. 2 and 466 ft. N of S line | Comp. 93 bbls. per hr.; ½-in. choke; 5,005 ft. |
| Humble O. & R. Co.'s No. 6 Dobbins, Ransom House Sur., 466 ft. from E and S lines of lease | Sand and shale 5,057 ft; cmtd. 7-in. csg. |
| Humble O. & R. Co.'s No. 2 Emory, W.C.R.R. Sur., 2,100 ft. from S line, 350 ft. from E line | Derrick. |
| Humble O. & R. Co.'s No. 1-B Hirsch, D. McIntyre Sur., 350 ft. from S line, 450 ft. from W line of "B" lease | Spudded. |
| Humble O. & R. Co.'s No. 2-B Hirsch, D. McIntyre Sur., 450 ft. out of NW cor. "B" lease | Drlg. shale and lime 4,835 ft. |
| Humble O. & R. Co.'s No. 6 Madeley, Ransom House Sur. | Comp. 90 bbls. per hour; ½-in. choke; 5,169 ft. |
| Humble O. & R. Co.'s No. 7 Madeley, Ransom House Sur., 310 ft. S of N line of survey and direct S offset Violet & Griffith's No. 7 Madeley | Drlg. sand and shale 4,899 ft. |
| Humble O. & R. Co.'s No. 10 Madeley, Ransom House Sur., 1,718 ft. SE of No. 6 | Drlg. sand rock 998 ft. |
| Humble O. & R. Co.'s No. 11 Madeley, Ransom House Sur., 1,398 ft. S of N line and 466 ft. W of E line | Rig. |
| Humble O. & R. Co.'s No. 12 Madeley, Ransom House Sur., 800 ft. from N line and 1,310 ft. from W line of tract | Location. |
| Humble O & R. Co.'s No. 13 Madeley, Ransom House Sur., 1,100 ft. SE of No. 6 | Location. |
| Humble O. & R. Co.'s No. 14 Madeley, Ransom House Sur., 400 ft. S of N line, south offset Houston-Tide Water No. 2 Hooper | Cmtd. surface csg. 1,275 ft. |
| Humble O. & R. Co.'s No. 28 Madeley, Ransom House Sur., 466 ft. S of N line, west offset Standard No. 1 Madeley | Former T.D. 480 ft; hole plugged; moving in to drill new hole. |
| Humble O. & R. Co.'s No. 1 W. P. McComb, L. Smith Sur., 500 ft. from W line, 253 ft. from N line of 150-ac. lease | Drlg. shale 1,792 ft. |
| Humble O. & R. Co.'s No. 2 McComb, Lemuel Smith Sur., 600 ft. from W line and 255 ft. from N line of lease | Drlg. sandy shale 275 ft. |
| Humble O. & R. Co.'s No. 3 McDonald, John Davis Sur., 466 ft. N of S line of lease and direct N offset Hamilton et al's No. 2 Moorehead | Sand 5,135 ft. |
| Humble O. & R. Co.'s No. 3 H. N. Moore, Lemuel Smith Sur., 466 ft. from E line, 1,065 ft. from S line of survey | Sand showing oil 5,067 ft; cmtd. csg. |
| Humble O. & R. Co.'s No. 4 Moore, Lemuel Smith Sur., 900 ft. N of No. 2 | Drlg. shale 3,512 ft. |
| Humble O. & R. Co.'s No. 5 Moore, Lemuel Smith Sur., 933 ft. S of No. 2 | Drlg. shale 3,027 ft. |
| Humble O. & R. Co.'s No. 6 Moore, Lemuel Smith Sur., 5,900 ft. from W line, 466 ft. from S line of lease | Sand showing oil 5,024 ft; cmtd. csg. |
| Humble O. & R. Co.'s No. 7 Moore, Lemuel Smith Sur., 933 ft. E of No. 6 | Drlg. sand and boulders 1,310 ft. |
| Humble O. & R. Co.'s No. 8 Moore, Lemuel Smith Sur., 700 ft. W of No. 1 | Drlg. shale 3,259 ft. |
| Humble O. & R. Co.'s No. 12 Moore, Lemuel Smith Sur., 1,700 ft. from S line, 1,250 ft. from W line of lease | Drlg. shale 3,805 ft. |
| Humble O. & R. Co.'s No. 14 Moore, Lemuel Smith Sur., 466 ft. from W line, 330 ft. from S line of tract | Drlg. shale 2,808 ft. |
| Humble O. & R. Co.'s No. 2 Ezra Moorehead, 466 ft. E and 466 ft. S from most southerly NW cor. of L. A. Lang Sur. | Spudded. |
| Humble O. & R. Co.'s No. 28 South Tex. Dev. Co., 1,450 ft. from S line, 900 ft. from W line of T. C. Howell Sur. | Location. |
| Humble O. & R. Co.'s No. 29 South Tex. Dev. Co., 1,900 ft. from S line, 1,300 ft. from E line of T. C. Howell Sur. | Location. |
| Humble O. & R. Co.'s No. 32 South Tex. Dev. Co., 1,300 ft. from S line, 4,800 ft. from E line of Theo. Slade Sur. | Location. |
| Humble O. & R. Co.'s No. 33 South Tex. Dev. Co., 1,300 ft. from S line, 4,000 ft. from E line of Theo. Slade Sur. | Location. |
| Humble O. & R. Co.'s No. 34 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 33 | Location. |
| Humble O. & R. Co.'s No. 35 South Tex. Dev. Co., Theo. Slade Sur., 1,095 ft. NE of No. 34 | Location. |
| Humble O. & R. Co.'s No. 36 South Tex. Dev. Co., Theo. Slade Sur., 1,010 ft. NE of No. 35 | Location. |
| Humble O. & R. Co.'s No. 37 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 36 | Location. |
| Humble O. & R. Co.'s No. 38 South Tex. Dev. Co., Theo. Slade Sur., 467 ft. N of S line of survey, north offset Houston-Tide Water No. 2 Hamman | Drlg. shale and lime 4,943 ft. |
| Humble O. & R. Co.'s No. 39 South Tex. Dev. Co., Theo. Slade Sur., north offset No. 1 Sullivan State | Drlg. shale and lime 3,967 ft. |
| Humble O. & R. Co.'s No. 40 South Tex. Dev. Co., Theo. Slade Sur., 467 ft. N of S line, north offset Tide Water No. 5 Lewis | Drlg. shale and lime 3,296 ft. |
| Humble O. & R. Co.'s No. 41 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. S of No. 24 | Location. |
| Humble O. & R. Co.'s No. 1-B South Tex. Dev. Co., C. T. Darby Sur., 450 ft. W of E line of survey, and 350 ft. N of S line of D. McIntyre Sur. | Formerly comp. producer 5,191 ft; pulling screen to W.O. |
| Humble O. & R. Co.'s No. 2-B South Tex. Dev. Co., C. T. Darby Sur., due W offset No. 2 Emory | Comp. 106 bbls. per hr.; ½-in. choke; 5,154 ft. |
| Humble O. & R. Co.'s No. 1 Sullivan State Land, center of State land tract and due S offset Humble's No. 39 South Tex. Dev. Co. | Sand showing oil 5,094 ft; cmtd. csg. |
| Humble O. & R. Co.'s No. 1 Mrs. L. Wiggins (23 acres), L. Smith Sur., 466 ft. from N and W lines of lease | Drlg. gumbo 4,361 ft. |
| Humble O. & R. Co.'s No. 1 Williams, Lemuel Smith Sur., center of 46-ac. tract | Sand showing oil 5,091 ft; cmtd. csg. |
| Humble O. & R. Co.'s No. 2 Williams, Lemuel Smith Sur., 252 ft. from N line and 600 ft. from W line of 46-ac. tract | Derrick. |
| Humble O. & R. Co.'s No. 3 Williams, Lemuel Smith Sur., 466 ft. W of E line in center of 46-ac. tract N and S | Rig. |
| M. J. Munn's No. 1 South Tex. Dev. Co., 150 ft. from E line, 140 ft. from S line of Lot 114, Clark Beach Sur. | Drlg. sticky shale 1,454 ft. |
| Navarro Oil Co.'s No. 1 Perry heirs, C. M. Wiggins Sur., 466 ft. from W line of lease in center N and S | Drlg. sticky shale 2,525 ft. |
| Neuhaus & Horn's No. 1 South Tex. Dev. Co., center of L. L. Horn 16.31-ac. tract in T.&N.O. Sur. No. 5 | Derrick. |
| Neversuch Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 466 ft. from S line in center E and W of 90 acres | Comp. 41 bbls. per hr.; 750 lbs.; 9/64-in. choke; 5,125 ft. |

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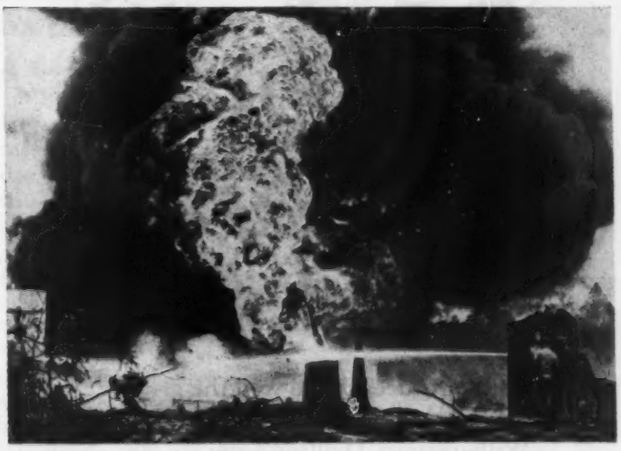

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Neversuch Oil Co.'s No. 2 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 933 ft. N of No. 1, in center of tract E and W ..... Rigging up.
North Star Oil Co.'s No. 1 Crestwood, T.&N.O. Sur. 15, 466 ft. from S and W line of 77-ac. tract ..... Location.
Showers & Moncrief's No. 1 Dunn, Wilson Strickland Sur., 466 ft. from N line, 350 ft. from E line ..... T.D. 5,099 ft; cmtd. 7-in. csg. 4,985 ft.
Showers & Moncrief's No. 2 Dunn, Wilson Strickland Sur., 990 ft. S of No. 1 ..... Location.
Showers & Moncrief's No. 3 Dunn, Wilson Strickland Sur., 990 ft. S of No. 2 ..... Location.
Skelly Oil Co.'s No. 1 John Rhoden (formerly Parlyn Oil Co.'s No. 1 John Rhoden), Wilson Strickland Sur., center of 14.9-ac. tract ..... Shale 968 ft; cmtd. surface pipe.
Skelly Oil Co.-Conroe Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 466 ft. from S line of 32.63-ac. lease in center E and W ..... Drlg. sticky shale 2,656 ft.
South Gulf Oil Co.'s No. 1 E. M. Rauh, T.&N.O. Sur. 5, 338 ft. from E line of 20-ac. lease in center of N and S ..... Spudded.
Southland Oil Co.'s No. 3 Cummings, Wilson Strickland Sur., 990 ft. S of No. 2 ..... Shale 5,055 ft.
Southland Oil Co.'s No. 3 Cummings, Wilson Strickland Sur. ..... Location.
Southland Oil Co.'s No. 4 Cummings, Wilson Strickland Sur. ..... Spudded.
Standard Oil Co. of Kansas' No. 1 Madsley, Ransom House Sur., 466 ft. S of N line, 465 ft. W of E of lease ..... T.D. 5,119 ft; blew out and cratered; on fire.
Standard Oil Co. of Kansas' No. 2 Madsley, Ransom House Sur., 932 ft. S of No. 1 ..... T.D. 1,200 ft; blew out and cratered; burning.
Standard Oil Co. of Kansas' No. 1 Smith & Ratcliffe, 1,065 ft. NW along SW line from SW cor. of lower W. S. Rhodes Sur., 460 ft. northeasterly at right angles ..... Location.
Standard Oil Co. of Kansas' No. 2 Smith & Ratcliffe, lower W. S. Rhodes Sur., 207 ft. from N line, 403 ft. from E line ..... Comp. 125 bbls. per hr.; 750 lbs.; ¾-in. choke; 5,126 ft.
C. C. Steinberger's No. 2 South Tex. Dev. Co., T.&N.O. Sur., Abst. 568, 1,100 ft. from S line in center E and W of 25-ac. tract ..... Drlg. sticky shale 3,050 ft.
Steinberger, Brown & Wheeler's No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 5, center of S 20 acres of 50-ac. lease ..... Comp. 125 bbls. per hr; 5,080 ft.
Strake Pet., Inc.'s No. 1 Keystone Mills, Lemuel Smith Sur., 1,200 ft. southward along W line of Alpha 200-ac. lease from NW cor. and 466 ft. W at right angles ..... Drlg. sand and boulders 930 ft.
Strake Pet., Inc.'s No. 1 Elisabeth Moody, C. B. Stewart Sur., 1,400 ft. from S line and 467 ft. from E line of 726-ac. tract ..... Drlg. shale 1,112 ft.
Sun Oil Co.'s No. 1 Keystone Mills, 466 ft. from N and E lines of John Bricker Sur. ..... Drlg. shale 250 ft.
Sun Oil Co.'s No. 1 W. S. Stewart, 466 ft. from S and E lines of J. M. Real Sur. ..... Drlg. sticky shale 1,252 ft.
The Texas Co.'s No. 1 H. M. Dudley, C. B. Stewart Sur., 466 ft. S 15 deg. E, 466 ft. S 75 deg. W from NE cor. of lease ..... Drlg. sandy shale 3,813 ft.
The Texas Co.'s No. 6 Moody, Ransom House Sur., 466 ft. from E line and 466 ft. from N line of lease.... T.D. 5,013 ft; cmtd. 7-in. csg. on bottom.
The Texas Co.'s No. 7 Moody, Ransom House Sur., 1,396 ft. from N line and 466 ft. from E line of lease.... Drlg. gumbo 1,780 ft.
The Texas Co.'s No. 9 Moody, S 40 deg. W 3,879 ft., N 30 deg. W 254 ft. from SE cor. of Ransom House Sur. ..... Drlg. shale and lime 3,772 ft.
The Texas Co.'s No. 10 Moody, 3,030 ft. from E line, 600 ft. from S line of Ransom House Sur. ..... Location.
The Texas Co.'s No. 11 Moody, Ransom House Sur., S 75 deg. W 466 ft. and S 15 deg. E 385 ft. from SE cor. Wilson Strickland Sur. ..... Comp. 95 bbls. per hr.; 5,116 ft.
The Texas Co.'s No. 13 Moody, 3,180 ft. from E line, 466 ft. from S line of Ransom House Sur. ..... Location.
The Texas Co.'s No. 14 Moody, 1,330 ft. from E line, 466 ft. from S line of R ansom House Sur. ..... Sticky shale 1,310 ft; cmtd. 10¾-in. csg. 1,297 ft.
The Texas Co.'s No. 16 Moody, 1,333 ft. SW along S line of Wilson Strickland Sur. from SE cor. and 466 ft. S at right angles in Ransom House Sur. .... Derrick.
The Texas Co.'s No. 2 Rhodes, 979 ft. 15 deg. W, 466 ft. N 75 deg. E of SW cor. of W. S. Rhodes Sur. .... Location.
The Texas Co.'s No. 3 Rhodes, Rhodes Sur., 1,854 ft. N 15 deg. W and 466 ft. N 75 deg. E of SW cor. of survey ..... Gumbo 1,287 ft; cmtd. csg.
The Texas Co.'s No. 4 Rhodes, 2,786 ft. N 15 deg. W and 478 ft. N 75 deg. E from SW cor. of Rhodes Sur. Comp. 125 bbls. per hr; 5,115 ft.
The Texas Co.'s No. 5 W. S. Rhodes, 466 ft. S of SW cor. of C. T. Darby Sur., and 350 ft. at right angles in W. S. Rhodes Sur. ..... Location.
The Texas Co.'s No. 6 Rhodes, 2,000 ft. W of E line of lease and 466 ft. S of S line of C. A. West Sur. in W. S. Rhodes Sur. ..... Drlg. hard sand 1,232 ft.
The Texas Co.'s No. 7 Rhodes, 1,310 ft. from E line of lease and 330 ft. S of S line of C. A. West Sur. in W. S. Rhodes Sur. ..... Location.
The Texas Co.'s No. 8 Rhodes, 330 ft. S of S line of C. A. West Sur., and 330 ft. W of W line of John Massey Sur. in W. S. Rhodes Sur. ..... Location.
The Texas Co.'s No. 10 Rhodes, 466 ft. W, 466 ft. N of SE cor. of W. S. Rhodes Sur. ..... Derrick.
The Texas Co.'s No. 11 Rhodes, 466 ft. from S line, 1,396 ft. from E line of W. S. Rhodes Sur. ..... Location.
Harvey Thornton's No. 1 John Rhodes, Ransom House Sur., center of 3.25-ac. tract ..... Cmtd. surface csg. 1,297 ft.
Tide Water Oil Co.'s No. 2 Freeman, John Davis Sur., 1,384 ft. from S line, 332 ft. from W line of 36 acres.. Spudded.
Tide Water Oil Co.'s No. 5 Lewis, C. B. Stewart Sur., 1,449 ft. from W line, 467 ft. from N line of tract.. Comp. 90 bbls. per hr.; 950 lbs.; ½-in. choke; 5,162 ft.
Tide Water Oil Co.'s No. 6 Lewis, C. B. Stewart Sur., 2,592 ft. from N line, 467 ft. from W line of tract. Comp. 55 bbls. per hr.; 500 lbs.; ¾-in. choke; 5,097 ft.
Tide Water Oil Co.'s No. 7 Lewis, C. B. Stewart Sur., 3,028 ft. from N line, 467 ft. from E line of tract.. Drlg. shale 5,089 ft.
Tide Water Oil Co.'s No. 8 Lewis, C. B. Stewart Sur., 2,333 ft. from N line, 3,333 ft. from W line of tract.. Cored sand 5,184 ft.
Tide Water Oil Co.'s No. 9 Lewis, C. B. Stewart Sur., 1,570 ft. from S line, 466 ft. from W line of tract.. Drlg. sandy shale 4,657 ft.
Tide Water Oil Co.'s No. 10 Lewis, C. B. Stewart Sur., 650 ft. from E line, 466 ft. from N line of survey.. Cmtd. surface csg. 1,042 ft.
Tide Water Oil Co.'s No. 11 Lewis, C. B. Stewart Sur., 1,565 ft. from N line, 467 ft. from W line of lease.. Gumbo 930 ft; cmtd. csg.
Tide Water Oil Co.'s No. 12 Lewis, 1,584 ft. from E line, 467 ft. from N line of lease, C. B. Stewart Sur.. Location.
Tide Water Oil Co.-Republic Prod. Co.'s No. 4 South Tex. Dev. Co., 467 ft. from N line, 467 ft. from W line of T.&N.O. Sur. No. 5 ..... Location.
Tide Water Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 330 ft. from E line, 577 ft. from S line of lease ..... Drlg. shale 4,317 ft.
Tide Water Oil Co.'s No. 2 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 330 ft. from E line, 467 ft. from N line of lease ..... Drlg. shale 3,836 ft.
Tide Water Oil Co.-Republic Prod. Co.'s No. 3 South Tex. Dev. Co., T.&N.O. Sur. 15, 330 ft. from E line, 466 ft. from N line of lease ..... Derrick.

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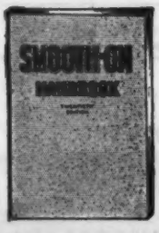


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MARKHAM—MATAGORDA COUNTY

Powers Prod. Co.'s No. 1 Meyers, 100 ft. N, 535 ft. W of SE cor. of Blk. 1, Wm. Hadden Sur. ..... Set 24 ft. of 5-in. screen 3,338 ft; comp. 250 bbls. daily; ½-in. choke; 50 lbs. on tubing and 220 lbs. on csg.; 36.9 A.P.I. grav.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 4 Stark, 675 ft. E, 340 ft. N of SW cor. Marshall Beauchamp Sur. ..... Drlg. gumbo 1,411 ft.

CLAY CREEK—WASHINGTON COUNTY

Clay Creek Oil Co.'s No. 2 Bimage, J. F. Perry Sur., 1,000 ft. from S line, 150 ft. from E line of survey.. S.D. 1,354 ft; waiting heavier rig.
Sun Oil Co.'s No. 6 Clay, J. F. Perry Sur. ..... Set surface pipe 121 ft.
Sun Oil Co.'s No. 1 A. Schulte, J. F. Perry Sur., 264 ft. from NE line, 300 ft. from SE line of tract ..... Abd. 1,786 ft.

REFUGIO—REFUGIO COUNTY

Ed Jones' No. 4 Mitchell, Town tract, 900 ft. S of No. 1-B Mitchell ..... No report.

## SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Olympic Oil Co.'s No. 1 Luckett, 1,180 ft. S, 75 ft. W of NE cor. Sec. 42-9s-2w ..... Standing 1,775 ft.
Phillips & Artigue's No. 2 Cruse (W.O.), 85 ft. from E line, 60 ft. from N line of tract in Sec. 47-9s-2w.... Standing 1,862 ft.
Yount Lee Oil Co.'s No. 11 Housierre-Latrielle, 1,010 ft. N, 5,050 ft. S of SW cor. Sec. 47-9s-2w ..... No report.

DARROW—ASCENSION PARISH

Rio Bravo Oil Co.'s No. 2 Community, Sec. 31-10s-2e, 1,760 ft. S, 600 ft. W of No. 1 ..... Drlg. hard sand and boulders 691 ft.
Rio Bravo Oil Co.'s No. 1 Gumbel, 4,000 ft. W, 250 ft. S of NE cor. of S. Gumbel & Co. tract, Sec. 33-10s-2e.. Coring sand 4,526 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 23 United Land Co., Sec. 15-10s-4e, 200 ft. N and 90 ft. W of No. 3 ..... Drlg. 220 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 3 Waite, 330 ft. out of NE cor. SE Sec. 12-9s-7w ..... Bldg. road to location.
Shell Pet. Corp.'s No. 2 Fontenot, Sec. 7-9s-6w, direct E offset Magnolia's No. 2 Waite ..... Cored brittle shale 6,270 ft.
Shell Pet. Corp.'s No. 3 Heyd, 265 ft. N, 330 ft. W of SE cor. NE Sec. 12-9s-7w ..... Rigging up.
Shell Pet. Corp.'s No. 1 Stafford, 825 ft. S, 225 ft. E of NW cor. Sec. 12-9s-6w ..... Derrick.

LOCKPORT—CALCASIEU PARISH

Lockport Oil Co.'s No. 1 Phoenix ..... D.S. stuck 1,200 ft; standing.
Magnolia Pet. Co.'s No. 10 Bordages, Sec. 8-10s-9w, 1,-001 ft. E, 335 ft. N of SW cor. of lease ..... Drlg. shale 5,700 ft.
Magnolia Pet. Co.'s No. 6-A Farquahar, 1,020 ft. E, 150 ft. N of center of Sec. 8-10s-9w ..... Sand 6,454-61 ft; set 1 joint of screen; comp. 150 bbls. daily.
Magnolia Pet. Co.'s No. 9 Faquahar, 200 ft. N, 150 ft. E of SW cor. NE SE Sec. 8-10s-9w ..... Rigging up.
Union Sulphur Co.'s No. 5 Martha Moss, Sec. 8-10s-9w (location to come) ..... Rigging up.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 771 fee (D.D.), 431 ft. S and 340 ft. W of center of Sec. 29-9s-10w ..... T.D. 5,173 ft; sidetracking 5,159 ft.
Union Sulphur Co.'s No. 776 fee, 125 ft. S, 1,490 ft. W of center Sec. 30-9s-10w ..... Drlg. shale 4,705 ft.

VINTON—CALCASIEU PARISH

Vinton Pet. Co.'s No. 22 Vincent, 685 ft. N, 620 ft. E of SW cor. Sec. 34-10s-12w, in Lot 116 ..... Drlg. gumbo 920 ft.
Wilson-Broach's No. 9 Wilson, Sec. 33-10s-12w, 200 ft. N of No. 8 and 25 ft. E of W line of Strip 7 ..... Set 29 ft. of 3-in. screen 3,542 ft; bailed dry; pulling screen.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 3 Alliance Trust Co., 600 ft. from N line, 1,460 ft. from W line of Sec. 24-11s-1w ..... T.D. 4,717 ft; cleaned hole; reaming.
Pure Oil Co.'s No. 2 Mulvay, Sec. 24-11s-1w, 1,515 ft. from N line, 1,150 ft. from E line of tract ..... Coring sandy shale 4,185 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 25 Watkins (D.D.), 112 ft. N and 2,795 ft. W of SE cor. of Sec. 13-12s-10w .... Rock 2,995 ft.
Wilfred Lahaye's No. 1 Olevia, Sec. 36-12s-10w, in 2-ac. tract ..... Spudded and S.D.
Jim Oil Co.'s No. 11 Irwin, Sec. 13-12s-10w, 500 ft. N, 75 ft. W of No. 4 ..... No report.
Lackawanna Oil Co.'s No. 1 Ellender, 330 ft. S, 150 ft. E of NW cor. SE SE Sec. 21-12s-10w ..... Derrick.
Massert & Cruse's No. 1 J. B. Duhon, 656 ft. S, 325 ft. E of NW cor., Sec. 26-12s-10w ..... Derrick.
The Texas Co.'s No. 10-B State, 1,000 ft. E, 300 ft. N of NE cor, Sec. 13-12s-10w ..... Spudded.
The Texas Co.'s No. 11-B State, 1,000 ft. E, 600 ft. N of NE cor. Sec. 13-12s-10w ..... Location.
Union Sulphur Co.'s No. 3 Gulf Land-Pure lease, 1,958 ft. N, 200 ft. W of SE cor. Sec. 11-12s-10w ..... Cored sand showing oil 8,320-27 ft.; D.S. stuck.
Yount Lee Oil Co.'s No. 13 School Land, Sec. 15-12s-10w, 200 ft. S of No. 11 ..... Salt 3,316-3,709 ft.

PORT BARRE—ST. LANDRY PARISH

The Texas Co.'s No. 13 Botney Bay, Sec. 4-6s-5e, 185 ft. W of E line of lease and direct offset Gulf's No. 3 Wilson-Cockran ..... Spudded.
The Texas Co.'s No. 14 Botney Bay, Sec. 4-6s-5e, 274 ft. W of most southerly NE cor. of 562-ac. tract.. Derrick.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co.'s No. 2 Gay, 520 ft. S, 200 ft. E of center Sec. 32-9s-11e ..... Drlg. 2,695 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 6 Wilbert, Sec. 9-11s-12e, 200 ft. out from No. 5 ..... Salt 5,490-5,556 ft; T.A.

CAMERON MEADOWS—CAMERON PARISH

Magnolia Pet. Co.'s No. 3 Cameron Meadows, 3,630 ft. S, 1,960 ft. W of NE cor. Sec. 21-14s-13w..... Set 1 joint of 7-in. screen 4,791 ft; tested S.W.; pulling screen to deepen.

STARKS—CALCASIEU PARISH

Emerson & Stark's No. 2 Industrial, 400 ft. S of No. 1, in SE cor. NE NW Sec. 30-9s-12w..... Abd. 4,715 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 13-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Drlg. sticky shale 5,325 ft.


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## TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Bunte, Inc.'s No. 1 Dittert, M. N. Allen Sur., 200 ft. SW, 300 ft. NW from W cor. of Henry Vornkahl 16 acres ..... Cored sand 3,452-63 ft.
Great Southern Oil Co.'s No. 1 Schevojas, 329 ft. N, 78 deg. E of N cor. B. Dottery Sur. ..... Drlg. shale and boulders 3,125 ft.
Sun Oil Co.'s No. 1 R. W. Theuman, Juan DeLeon Sur., 900 ft. S of N line, 924 ft. E of W line of 135-ac. lease ..... S.D. 4,734 ft.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 2 Hunt, Pledger, 6,550 ft. from E line, 5,550 ft. from S line of W. Carson Sur.. Location.
John Deering's No. 1 C. W. Chapman, 924 ft. from S line, 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Sand rock 5,788 ft; standing.
Tri-fin Oil Co.'s No. 1 Moore, 1,635 ft. SW of Chocolate Bayou, 693 ft. SE of NW line of F. Moore Sur. ..... T.D. 3,102 ft; laying fuel line.

BURLESON COUNTY

Ball & Knob's No. 1 Polansky, M. B. Lawrence Sur., 359 ft. from E line, 469 ft. from N line of 155-ac. tract ..... No report.
Sampson O. & G. Co.'s No. 2 Duckworth & Gilley, P. Singleton Sur., 50 ft. SE of No. 1 ..... No report.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW, 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft; standing.

CHAMBERS COUNTY

Weaver-Ray's No. 1 Fisher, John Tjams Sur., 210 ft. S of Rucker et al's No. 1 Fisher ..... S.D. 2,400 ft.
Yount Lee Oil Co.'s No. 1 Plummer, H.&T.C. Sur. No. 28, 2,340 ft. from N line, 2,640 ft. from W line of section ..... Drlg. sandy shale 8,505 ft.

COLORADO COUNTY

Danciger O. & G. Co. and L. E. Hulte' No. 1 C. L. Raver, B.B.B.&C. Sur., Sec. 1, 990 ft. out of SW cor. of 477-ac. tract ..... Derrick.
Humble O. & R. Co.'s No. 1 John McShane, L.&G.N. Sur., Sec. 42, 466 ft. out of NE cor of tract ..... Shale 180 ft; fishing 3 joints of csg.
Pilot Oil Co.'s No. 1 Tate, Cooke & DeWeese Sur., 150 ft. NE, 50 ft. NW of S cor. of survey ..... S.D. 1,540 ft.

FORT BEND COUNTY

John Deering and Benedum & Trees' No. 1 Westenfeld, 900 ft. E of W line, 310 ft. N of S line of M. Escalera Sur. ..... Drlg. gumbo 3,100 ft.
Lowrie & Young's No. 1 Jackson Brown, Pilant Lake, Wm. Barrett & Abner Harris Sur., 152 ft. E, 158 ft. N out of SE cor. Humble 182-ac. Brown lease in D. Hale 548-ac. tract ..... Shale 5,025 ft; S.D.
Lynch et al's No. 1 Kneitz, 690 ft. from NW line, 350 ft. from SW line of Sec. 43, H.&T.C. Sur. ..... S.D. for repairs 672 ft.
Naylor & DeCosta's No. 1 Naylor, 4,350 ft. N, 55 deg. E from SW cor. 653-ac. tract in Christman Sur. .... T.D. 7,014 ft; standing.

GALVESTON COUNTY

Humble O. & R. Co.'s No. 1 Rosenkranz, Green's Bayou, center N½ of Lot 10, Sarah White Sur. ..... T.D. 7,119 ft; milling out of csg. 6,646 ft.

GRIMES COUNTY

Harnett et al's No. 1 Dodd, Timothy Jones Sur. ..... Standing 2,689 ft.
W. J. Brightwell's No. 1 Combs, Samuel Beauman Sur., 850 ft. from S line, 622 ft. E of extreme W line of 276-ac. tract ..... Standing 5,250 ft.
Terrell & Clay's No. 1 D. M. Howard, T. Jones Sur., 450 ft. from E line, 750 ft. from S line of lease ..... Location.

HARDIN COUNTY

Joe E. Proctor's No. 1 Russell & Teague, 2,650 ft. E, 2,-777 ft. N of NW cor. of Wm. W. Young Sur. ..... T.D. 2,685 ft; hole heaved in.
Robichaux et al's No. 1 Kirby Lbr. Co., 4,167 ft. W, 2,500 ft. N of SE cor. of Ben Hawkins Sur. ..... S.D. 3,900 ft.

HARRIS COUNTY

Mills Bennett Prod. Co.'s No. 1 G. H. Klepple, March Sur., 400 ft. from N line, 330 ft. from W line of 84-ac. tract and survey ..... Spudded.
T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... S.D. 1,310 ft.
Cherry & Pritchard's No. 1 Dr. Griffith, S. Bell Sur., 583 ft. from E line, 60 ft. from N line of 250-ac. tract ..... T.D. 756 ft; cmtd. 10-in. 650 ft.
John Deering et al's No. 2 Warren, T. Snell Sur., 100 ft. SW of No. 1 ..... Drlg. shale 1,812 ft.

JASPER COUNTY

Smitherman, Neilson & Noble's No. 1 Cameron, Wm. Jones Sur., 400 ft. S 45 deg. W of SW cor. of J. W. Allen 300-ac. tract ..... Sand 2,950 ft.

JEFFERSON COUNTY

Carroll & Miller's No. 1 C. A. Mashman, W. B. Dyches Sur., 462 ft. W of highway and 105 ft. S of NE line of 13-ac. tract ..... Derrick.
Coastal Oil Co.'s No. 1 Young, 250 ft. from E line, 140 ft. from S line of 40-ac. tract, in Blk. F-5, Lot 6, Joseph Grigsby Sur. ..... Drlg. sticky shale 3,817 ft.
Jack Schultz' No. 2 Todd, Cheek, 1,800 ft. S of No. 1 and 130 ft. E of W line of Wm. Carr Sur. ..... Shale 7,000 ft; S.D. to change rigs.

LIBERTY COUNTY

Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 3,360 ft. W of Trinity River ..... Spudded and S.D.
James Papadakis' No. 1 Eicke, Reason Green Sur., 300 ft. from W line of 300-ac. tract in center N and S... Spudded and S.D.

MATAGORDA COUNTY

Cockburn Oil Corp.'s No. 5 Hawkins, Shepherds Mott, 2,200 ft. SE, 1,800 ft. NE of W cor. Daniel McCarthy Sur. ..... Drlg. shale 5,280 ft.
Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 2,000 ft. E from SW cor. of Seth Ingram Sur. ..... Standing 2,720 ft.
Humble O. & R. Co.'s No. 1 Pierce Est., Isaac Foster Sur., 330 ft. from N line, 330 ft. from E line of tract ..... Shale 6,560 ft; fishing 6 joints drill pipe.
R. L. Sprinkle et al's No. 1 Turner, 4,900 ft. from NE line, 3,800 ft. from SE line of M. Cummings Sur. ... Rig.
United North & South Dev. Co.'s No. 2 Stoddard, 25 ft. each way out of NW cor. of Lot 19, Buckeye Townsite ..... Moved rig to No. 1 Stoddard to work over.
United North & South Dev. Co.'s No. 1 St. L. & B. M. "Y," 200 ft. S of main line of RR and 200 ft. NE of SW fork of "Y" in townsite, J. C. Keller Sur. ... Shale 5,735 ft; cmtd. 9⅝-in. csg. on bottom.

MONTGOMERY COUNTY

Continental Oil Co. and Julius Fohs' No. 1 Rock Creek Lbr. Co., J. Foster Sur., 1,866 ft. S and W out of NE cor. of 168-ac. lease ..... Drlg. shale 4,556 ft.
C. J. Daniels' No. 1 A. H. Salia, Wm. Barker Sur., 390 ft. from E line, 400 ft. from N line of W 36 acres of Salia tract ..... Drlg. gumbo 1,155 ft.
Mound Creek Oil Co.'s No. 1 Sealey, 3,751 ft. E and 5,088 ft. N, from SW cor. of M. Cartwright Sur. in John Sealey Sur. ..... Sticky shale 1,366 ft; cmtd. 10¾-in. csg. on bottom.
A. H. Parsons et al's No. 2 Drought, Kronknite Sur., 3,000 ft. N, 100 ft. E of NW cor. of A. B. Hill 46½ acres ..... Drlg. shale 3,759 ft.
R. L. Sprinkle's No. 1 Rohifs, 500 ft. out of SW cor. of H. Proneus Sur. ..... Drlg. sticky shale 2,182 ft.
Sutton-Hawkins' No. 1 Foster, Hosea de la Garza Sur., 3,333 ft. N, 1,320 ft. E of NE cor. of W. J. Johnson 100-ac. tract ..... S.D. 4,287 ft.

**NEWTON COUNTY**

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line, 500 ft. from N line of tract ..... Standing 2,240 ft.

**POLK COUNTY**

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 255-ac. tract ..... S.D. 3,948 ft.

Harrison & Abercrombie's No. 1 Carter (535-ac. lease), N 60 deg. E 1,151 ft. and N 50 deg. 145 ft. out of NW cor. of John Sweeney Sur. ..... No report.

Koch & Stevens' No. 1 Ruth Lawrence, Castallian Sur., 300 ft. from W line, 790 ft. from S line of 54-ac. tract ..... Washing to bottom 2,683 ft.

Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Drlg. sandy shale 4,415 ft.

Dick Schwabb and Shell Pet. Corp.'s No. 2 Davis & Holmes, A. Viesca Sur., 485 ft. N, 376 ft. W of NE cor. of J. Duff 35 acres ..... T.D. 4,438 ft; plugged 3,000 ft. up in csg.

**REFUGIO COUNTY**

Gulf Prod. Co.'s No. 2 J. O'Connor (W.O.), C.E.P.I.&M. Co. Sur. No. 49, 1,200 varas from S line, 1,500 varas from E line of tract ..... Coring shale 6,218 ft.

Gulf Prod. Co.'s No. 3 O'Connor, C.E.P.I.&M. Co. Sur., No. 133, 6,235 ft. SW along SE line from NE cor. of John O'Connor land, thence 2,639 ft. NW at right angles ..... Derrick.

Humble O. & R. Co.'s No. 3 O'Connor, Florentine Rice Sur., 13,757 ft. from S line at right angles, 3,412 ft. from E line at right angles of 5,545-ac. ranch ..... Drlg. sand 5,376 ft.

**SAN JACINTO COUNTY**

Weaver et al's No. 1 Delta Land & Timber Co., 1,400 ft. NE of SW line of James W. Robertson Sur., and 800 ft. at right angles ..... No report.

**TRINITY COUNTY**

C. M. Beckner's No. 1 Gibson, Wm. Beasley Sur., 600 ft. S along E line of survey and 150 ft. W at right angles ..... T.D. 1,192 ft; plugged to 999 ft.

South Gulf Oil Co.'s No. 1 Trinity Lbr. Co., 290 varas from N line, 650 varas from E line of Sec. 17, H.&T.C. Sur. ..... Dry and abd. 3,585 ft.

**TYLER COUNTY**

Republic Prod. Co. and Houston Oil Co.'s No. 1 Sam Jeffcoat, E. Thompson Sur., 467 ft. N and E from SW cor. of 100-ac. tract ..... Derrick.

Republic Prod. Co. and Houston Oil Co.'s No. 1 Kirby, E. Thompson Sur., 467 ft. N and E from NE cor. of Sam Jeffcoat 100 acres ..... Derrick.

Republic Prod. Co. and Houston Oil Co.'s No. 1 Sterne fee (W.O.), 8,384 ft. from W line and 484 ft. from N line of Adolphe Sterne Sur. ..... S.W. sand 5,619 ft; plugged to 4,694 ft; set 6 ft. of 5-in. screen 4,690 ft; tested dry gas 2,020 lbs. on tubing and 1,950 lbs. on csg.

Republic Prod. Co. and Houston Oil Co.'s No. 1 Kirby-McShane, 467 ft. S and W of most northerly NE cor., B.B.B.&C. Sur. No. 17 ..... Coring sand 4,673 ft.

**VICTORIA COUNTY**

Gulf Prod. Co.'s No. 3 Keeran Ranch, Martin DeLeon Sur., 1,320 ft. NW of No. 1 ..... Drlg. sandy shale 6,235 ft.

Slick-Seeligson Corp.'s No. 2 McFaddin (D.D.), J. Varian Sur., 1,100 ft. NE of SW line, 625 ft. E of railroad.. T.D. 6,810 ft; plugged to 5,100 ft.

The Texas Co.'s No. 5 McFaddin, 1,300 ft. westerly, 300 ft. northerly at right angles from SE cor. of J. A. McFaddin 98-ac. tract ..... Drlg. shale 4,804 ft.

Quintana Oil Co.'s No. 1 McCormic, 500 ft. from SW line, 500 ft. from NW line of S.A.&M.G. Sur., Sec. 3, in most westerly NW cor. ..... Drlg. sandy shale 2,210 ft.

Union Oil Co.'s No. 3 Keeran, Martin DeLeon Sur., 500 ft. E of E line of Gulf lease and 1,900 ft. N of railroad ..... T.D. 6,648 ft; plugged to 5,400 ft.

**WALKER COUNTY**

Hart Oil Co.'s No. 1 Thompson, Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson 71-ac. tract ..... T.D. 2,023 ft; reaming 1,910 ft.

Pine Oil Co.'s No. 1 Smithers, Stephen Manning Sur., 700 ft. SW, 850 ft. SE of NE cor. of 266-ac. tract.... Abd. 3,680 ft.

**WALLER COUNTY**

Birdwell et al's No. 1 Robertson, John Baker Sur., 1,625 ft. from S line, 450 ft. from W line of 64-ac. tract ..... Derrick.

Hobson et al's No. 1 Joe W. Harris, 3,000 ft. from E line, 5,000 ft. from N line of H.&T.C. Sur. in Harris 1,475-ac. lease in Justo Liendo Sur. ..... Abd. 4,954 ft.

**WASHINGTON COUNTY**

Yequa Oil Co.'s No. 18 Pomacal, S. M. Williams Sur., 1,382 ft. from W cor. of Shulz 44-ac. tract, thence 123 ft. NW at right angles ..... T.D. 1,515 ft.

**WHARTON COUNTY**

Herman Heep's (was Dayvault-Tyler-Gardner's) No. 1 Dayvault, Wm. Kincheloe Sur., 200 ft. SW, 600 ft. SE of N cor. of 298-ac. tract ..... Drlg. tough gumbo 3,400 ft.

Pure Oil Co.'s No. 1 Stewart, 2,419 ft. NW, 1,650 ft. NE of S cor. of Sec. 25, Morris & Cummings Sur. ..... Drlg. sandy shale and broken sand 2,132 ft.

Smith & Daniels' No. 1 Mitchell, H.&T.C. Sur. No. 8, 330 ft. from NE line of NE 80-ac. tract in center of tract NW and SE ..... T.D. 6,442 ft; pulling tubing and screen to deepen.

Steed Prod. Co.'s No. 1 Tucker, 210 ft. W, 50 ft. N of NE cor. of S½ of SW¼ of Sec. 58, E.T.R.R. Sur. .... Sand showing gas 3,216 ft; making D.S. test.

## SOUTH LOUISIANA

**BEAUREGARD PARISH**

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W, 156 ft. S of NE cor. of NW Sec. 32-2s-9w ..... Standing 1,286 ft.

Trapp & Turnbull's No. 1 Long Bell, 102 ft. N, 227 ft. W, out of SE cor. SE SW Sec. 26-2s-10w ..... Spudded.

Trapp & Turnbull's No. 1 Roberts, 600 ft. W, 150 ft. S of NE cor. NW NE Sec. 6-3s-10w ..... Location.

**CALCASIEU PARISH**

Cannon & Hughes' No. 1 J. S. Reed, Sec. 18-10s-12w..... Derrick.

I. R. Irvine et al's No. 1 A. D. Mimms, 741 ft. N, 741 ft. W of SE cor. SE NE Sec. 20-9s-7w ..... No report.

**JEFFERSON DAVIS PARISH**

R. D. Finly's No. 1 Clarphy Lognion, SW NW Sec. 22-10n-4w ..... Cmtd. surface csg. 510 ft.

Humble O. & R. Co.'s No. 1 Devilbiss, 1,650 ft. S, 350 ft. W of NE cor. of Sec. 14-9s-4w ..... Drlg. sand 2,862 ft.

**LA FOURCHE PARISH**

Lahulu Oil Co.'s No. 1 La. Fourche Land Co., 150 ft. out of SE cor. NW NW Sec. 32-18s-22e ..... Spudded and S.D.

**PLAQUEMINES PARISH**

The Texas Co.'s No. 7 Garden Island ..... No report.

**ST. BERNARD PARISH**

Cook Drlg. Co.'s No. 1 Delecroix farm ..... Shale 4,177 ft.

**TERREBONNE PARISH**

The Texas Co.'s No. 7 Calliou Island, 300 ft. S, 300 ft. W of NE cor. Sec. 19-23s-20e ..... Sand showing oil 2,160-82 ft.

The Texas Co.'s No. 17 State-Lake Barre, 1,476 ft. W, 626 ft. S of NW cor. Sec. 20-21s-20e ..... T.D. 4,436 ft. in salt; sidetracking in salt 2,566 ft.

The Texas Co.'s No. 4 Lake Barre-L.L.&E., 3,802 ft. S, 2,075 ft. W of NW cor. Sec. 30-21s-20e in Sec. 36-21s-19e ..... Drlg. shale 3,840 ft.

**VERMILLION PARISH**

Shell Pet. Corp.'s No. 1 Herbert, 1,310 ft. W, 330 ft. N of SE cor. Sec. 10-15s-1e ..... Drlg. sticky shale 1,522 ft.

**VERNON PARISH**

Minerals Division Llano Co.'s No. 1 Llano Del Rio, 543 ft. E, 300 ft. S of NW cor. NW Sec. 34-2n-9w ..... No report.


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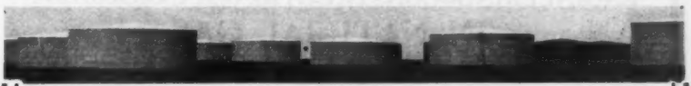

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## Gulf Coast Fields

(Continued from Page 46)

Gulf Production Co. and Magnolia Petroleum Co. as well as a number of smaller companies have acquired blocks and acreage in this latest flurry. This play is following up a smaller play which took place around Huffsmith last October and November following the encountering of interesting gas showings in a wildcat drilled in the William White Survey by Indian Hill Oil Co. and in which play Mills Bennett Production Co., Kirby Petroleum Co., Gulf Production Co. and United Gas Co. figured as the principal buyers. Since then considerable additional geophysical work has been done and lately Mills Bennett Production Co. has started drilling in a second test for the Huffsmith area.

### More Trouble for Union

Hard luck again has hit the Union Sulphur Co. in its efforts to explore the ultra deep horizons on the northwest side of the East Hackberry Dome, Cameron Parish, Louisiana. This company's No. 2 Gulf Land-Pure lease, Section 11-12s-10w, cored sandy shale showing oil at 8,320-27 feet but in going in to take another core to 8,334 feet stuck the core barrel and drill pipe. This company's first well on the lease also went to this sand, which gives promise of opening new deep production for the coast, but twisted off 61 fourbles of drill pipe and later had to be junked. Development on this side of the dome was started in 1932. Three wells have been completed in a 6,000-foot sand but the two on the Pure lease are the only ones which have gone to the deeper horizon.

Three new locations have been made in the Iowa district on the Calcasieu Parish-Jefferson Davis Parish line and drilling of these will do much to determine the extent of production of that field. One of these, Shell Petroleum Corp.'s No. 3 Heyd, 265 feet north and 330 feet west of the SE cor. NE Section 13-9s-7w, is a half mile south of production, while another, Magnolia Petroleum Co.'s No. 3 Waite, 330 feet out of the NE cor. SE Section 12-9s-7w, is a quarter of a mile north of production. The third new location, Shell's No. 1 Stafford, 825 feet east of the NW cor. Section 18-9s-6w, is just east of production. So far five wells have been completed at Iowa, which is owned by Magnolia Petroleum Co. and Shell Petroleum Corp., but these wells, all in a 6,900-foot sand, have been within a small area as offsets and little attempt has been made by the operators to spread out before.

Magnolia Petroleum Co.'s No. 3 Cameron Meadows, third test for that company's Cameron Meadows Field, southern Cameron Parish, Louisiana, set one joint of screen in a sand at a total depth of 4,791 feet but tested salt water and now is pulling screen to deepen. Location is 500 feet south of No. 2 Cameron Meadows, a small producer in a sand at 5,270 feet. No. 1, the discovery well, 500 feet north of No. 2, is in a sand at 3,250 feet.

Emerson & Starks have abandoned their No. 2 Industrial Lumber Co., semi-wildcat east of production on the north side of the Starks Dome, Calcasieu Parish, Louisiana. Present depth of the hole is 4,710 feet, after sidetracking the original hole drilled to 5,027 feet. These operators, however, have disposed of their lease to the Union Sulphur Co., which will carry on development.

### Jasper County Wildcat

Some interest now is being centered on a wildcat being drilled in Jasper County by Smitherman, Neilson & Noble. This test, located on Cameron Lumber Co. land and being in the William Jones Survey, not far from the Tyler County line, topped the Hockley at 2,322 feet from the grass roots (2,212 feet subsea). As this is virgin territory for Jackson drilling and few tests have been put down to that horizon, there is little control for correlation but from what can be determined this test is running from 200 to 250 feet high. The test now is reported as being in a hard sand showing gas around 2,950 feet. Several other shallower gas showings also have been reported. Unless something of importance is developed higher, the test will be carried to the Cockfield (upper Yequa) for a thorough test of the "Conroe Pay." The block, originally totaling 8,000 acres, is on what is known as the "Conroe Trend" and the location of the test is less than 10 miles to the north of the Spurger prospect, eastern Tyler County, where Republic Production Co. and Houston Oil Co. have a wildcat gas well and are carrying on development.

Smith and associates are pulling tubing and screen in their wildcat, No. 1 Mitchell, located in the H.&T.C. Survey No. 8, Wharton County, on Shell Petroleum Corp.'s Lake View prospect. The test, in which unsuccessful efforts were made last week to test gas showings with bottom of hole at 6,442 feet, probably will be deepened. In the test some distillate was shown but the bottom of the hole caved and will have to be cleaned. Steed Production Co.'s No. 1 Lurker, first test drilled on the Leech geophysical prospect, southern Wharton County, late in the week drilled into a sand showing gas at a total depth of 3,216 feet and at latest report was preparing to run a drill stem test. Location of this test is in Section 58, E.T.R.R. Survey. The prospect was discovered by Cockburn Oil Corp.


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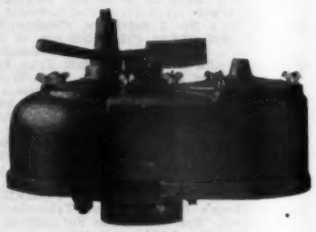

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